

A scholarly approach to student success in
Higher Education Volume 2



TRANSFORMATIVE PEDAGOGIES

Chief editor: J Pool
Assistant editors: MM Fernandes-Martins, M Fourie

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rated researcher. His research is located within the NWU's Research Unit for Self-directed Learning. For more information, see: <http://jako.nom.za/>

Kasturi Behari-Leak – Is a professor and interim Director of Academic and Professional Staff Development in the Centre for Higher Education Development at UCT, Kasturi is passionate about working with academics at all stages of their trajectories to support, enhance, deepen and transform the way teaching and learning are conceptualised and practised in HE. My work in this area focuses on the exploring the interplay between structure (national, institutional, departmental and disciplinary) and culture and how this influences academics' critical agency in the interest of change. She is President of the Higher Education Learning and Teaching Association of Southern Africa (HELTASA) and convenes a Staff Doctoral Programme in HELTASA. She has been elected President-elect for ICED (2020-2021) and President of ICED (2021-2023) and serves on the advisory committee for GHEAR, a sub-committee of the World Universities Network. As co- chair of the Curriculum Change Working Group at UCT, she facilitated discursive engagements on curriculum change and decolonisation across the university. She is on editorial boards for two international journals namely Teaching in Higher Education and Teaching and Learning Inquiry and has herself published in the higher education studies field.

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Juaneé Cilliers is the Head of the School of Built Environment, and Professor of Urban Planning at the Faculty of Design, Architecture and Building at the University of Technology Sydney (Australia). She has 17+ years' experience as Professional Planner, with professional registrations from both the South African Council for Planners (SACPLAN) and the Planning Institute of Australia (PIA). She is currently appointed as Extraordinary Professor of Planning at the North-West University (South Africa), following her former position as Head of Urban and Regional Planning and Leader of the Research Program for Sustainable Planning, Development and Implementation. Juaneé is a lifelong member of the International Society of City and Regional Planners (ISOCARP), serves on the Scientific Committee of ISOCARP and was the first ISOCARP Cyber Agora Curator (<https://isocarp.org/about-cyber-agora/>). She is a corporate member of the South African Planning Institute, member of the Organisation for Women in Science in the Developing World and member of the Carbon Leadership Forum. She holds a 4-year professional Planning degree (B.Art et Scien) and Master's in Planning degree (M.Art et Scien), as well as Master's in Economics degree (M.Com), and Doctoral degree in Urban and Regional Planning. Other training completed include Corporate Communications Training (NWU), Project Management Course (Potchefstroom Business School), Sustainable Communities Course (Aalto University, Finland), Bioeconomic Modelling of Natural Resource Use (ERSA, University of Cape Town), Local Governance for rural development Course (Wageningen University, The Netherlands) and the Sustainable Communities Course (University of Helsinki, Finland). Between 2008 and 2015 she was also appointed as international researcher at Wageningen University of Applied Sciences, the Netherlands. To date she has successfully supervised 84 final year research projects, 30 MSc students, 7 PhD students and 4 Post-Doctoral Fellows. She has published 52 journal papers, 70 conference papers, and 9 book chapters. In 2019 she was the recipient of the National South African Teaching Award for Teaching Excellence in South Africa. She was a finalist of the National Science and Technology Forum Awards and prize winner at the Woman in Science Awards. In 2021 she received the North-West University Award for Excellence in Community Engagement.

Willem van Vollenhoven – With extensive experience of the teaching profession for many years on school level; then since 2000 as lecturer and senior lecturer at the University of Pretoria (UP) in South Africa, in Education Management and Education Law as well as being actively involved in Open Distance Learning (ODL), I joined the North West University (NWU) in 2009 as an Associate Professor to nurture the challenges of Higher Education and ODL. During my time as lecturer, I received annually excellent feedback from students and was referred to as the model module in the whole program.

Since then I advanced to become coordinator of the academic function, supervising a personnel corps of 45 fellow academics in ODL in the Faculty of Education (FE). In 2015 I was appointed as academic manager at the Unit for Open Distance Learning (UODL) for the FE. My main function was to manage the 150 staff members responsible for ODL modules and steer the 14 programs in the faculty that were delivered by ODL mode to 30 000 students via different forms of blended learning and ensured both quality of programs and excellent student experience. My task included the promotion of the wide variety of continuing education that the FE offered, to provide open access to adult and continuing education while ensuring support to students to ensure a positive learning experience. I also had to negotiate short courses with local departments, submit proposals and tenders to them, negotiate program development with academics and the delivery of these extended programs. The focus was on hands-on skills development that students are practical ready for the challenges of their career.

From 1 April 2018 I was promoted as Chief Director at the NWU's Center for Teaching and Learning (CTL) reporting to the Deputy Vice Chancellor (DVC): Teaching and Learning. The Center's tasks are to plan the NWU's Teaching and Learning (TL) as well as the Academic Performance Plan (APP) strategically in collaboration with all Faculties and the Information Technology (IT) department to ensure professional development and a career trajectory to all academics to enhance themselves as University Teachers.

Members of the Editorial Board

Esmarie Strydom – Dr Esmarie is the Director for Special Projects and Research at the Centre for Teaching and Learning (CTL), North West University, Vanderbijlpark Campus, South Africa.

RESEARCH JUSTIFICATION

A Scholarly Approach to Student Success in Higher Education Volume 2 is a research book based on original research in the field of Higher Education enhancing theory and practice. The overarching theme for this publication relates to higher education pedagogic best practices. The chapters encapsulate empirical and conceptual research guided by theoretical frameworks.

This scientifically-based publication is underpinned by the underlying approaches for the advancement of scholarship in higher education. The contribution of the book offers original research. The content is aimed at academics as university teachers in the field of scholarship of teaching and learning. The work of an academic involves being a teacher and a researcher; teaching must be research-informed. Good teaching is grounded in a deep understanding of a discipline: the basis of academics' work is knowledge, with their identities embedded in discipline as knowledge learners, producers and disseminators.

This publication places emphasis on transformative curricula and pedagogies applicable to enhancing quality teaching and learning informed by a scholarly approach towards student success, as envisioned by the Department of Higher Education and Training (DHET) of South Africa. *A Scholarly Approach to Student Success in Higher Education Vol 2* fosters a space for academics to share developed learning and teaching practices and research toward student success. There are chapters that address the clear inequalities that persist in HE and building quality towards student access with success. Curriculum responsiveness pertaining to decolonisation, sustainable development and climate change, and the need for entrepreneurship development is also evident in the chapters.

A Call for Chapters was announced using different channels such as Higher Education Learning and Teaching Association of Southern Africa (HELTASA) News

and various inter-university communication platforms. A substantial number of manuscripts were submitted by local, national and international scholars. Under the auspices of the editors, assisted by selected national and international members of the editorial board, all of the manuscripts were scrutinised.

Those manuscripts that did apply to the standards and foci set for publication, went through a double-blind peer-review as well as an authentication process in order to secure the fact that the content was not plagiarised. An academic integrity specialist was appointed to analyse TurnItIn reports. Chapters were also language edited and corrections were made by the authors accompanied by a change-log which was screened by the editors. In cases where a discrepancy of the outcome from reviewers was reported, the chapter was submitted to a scholar of standing in the field in order for him/her to act as an arbiter to make a final decision regarding the merits of a particular chapter. All of the reports are currently preserved in the offices of the publisher.

A Scholarly Approach to Student Success in Higher Education Volume 2 adds to the established body of knowledge on the scholarship of teaching in Higher Education in South Africa. The relevance, nature, and novelty of this book publication is seated in its contribution to a scholarly approach to student success.

Chief Editor:

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FOREWORD

As I go through individual chapters, I celebrate and become inspired by the relevance and timeliness, the level of innovation and the creative responses to current debates on Higher Education teaching and learning. This, in a nutshell, is the core characteristic of the entire book.

Not only does each chapter challenge university teachers to revisit the approach to thinking, conceptualising, and designing teaching and learning opportunities, the authors have also, re-directed conversations at institutional leadership on the ‘universities we need’. Individual chapters are penned with precision, theorised sufficiently, and data generation strategies used demonstrate high-level scholarly repertoire fitting respectability from peers. The auto-reflexive tone embedded in the book, accompanied by a deliberate commitment to self-critique, warrants attention from researchers committed to addressing epistemic access, academics dedicated to inducting the next generation into their disciplines, academic developers leading research and innovation in design of responsive curricula and participatory pedagogies, postgraduate students producing new knowledge, and teaching and learning leadership in higher education.

The high-level conceptual and theoretical engagement characteristic of each chapter, with simultaneous illustrative applications to ‘day-to-day’ teaching and learning engagements, both attest to each author’s reputable standing in their fields of study and intellectual stature. Moreover, it is encouraging to note the level of passion, commitment, and zeal to matters of teaching and learning as well as assessment by authors from academic disciplines. In addition to being established researchers and postgraduate supervisors, academics whose work is already making ‘an in-road’ in the international arena, these contributors to the book demonstrate an outstanding commitment to the teaching and scholarship of their disciplines. To have professors and senior academics from various disciplines across

faculties as well as senior academic developers reporting on outstanding research findings on teaching and learning in one book is a rare occurrence within the academy. In this book there are even instances where both senior academics and academic developers are co-authoring a chapter, enabling disciplinary expertise and higher education studies cooperation in enhancing insight into teaching and learning for access, success and throughput.

In my capacity as an NRF rated researcher and one of the directors at the Center for Teaching and Learning who opened the NWU Teaching and Learning Conference in 2021 (where most of the chapters in this book were presented), I had the privilege to review some of the chapters. Drawing from the time I spent reviewing these chapters, I can safely say that the effort put forward by the authors indicates their clear commitment to the scholarship of teaching and learning. One outstanding fascination for me is the way slide presentations delivered at the Conference were developed into extended, well-thought-out chapters worthy, not only of readership by colleagues at the North-West University but all university teachers, academic developers, researchers, and postgraduate students within and outside the borders of South Africa. Each chapter sets the context for further and deeper reflection on current teaching and learning practices in Higher Education. Among other things, these include conceptualisations of transformation and decolonisation of the curriculum, the contextualisation of assessment practices, complexities with online-hybrid teaching and learning design, and epistemic access issues as they relate to embedding disciplinary ethos into mainstream undergraduate pedagogy and postgraduate supervision.

While the NWU T&L Conference created an opportunity for academics and academic developers to present ideas towards developing insight, share learning and work towards consensus-based approaches to teaching and learning best-practice, the commitment evinced in each chapter leaves the reader with a coherent discourse core to the academic project. Each chapter enables rich knowledge exchange, making it possible for changes in our thinking about teaching and learning to occur and revises attitudes towards students. My 'one take-away'

from the book is commitment by each author to critical self-reflection, a 'way of being' we all continue to develop into as we navigate the ever-changing knowledge construction terrain.

Prof Emmanuel M. Mgqwashu

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Contributor: A critical engagement with theological education in Africa: A South African Perspective (2022). AOSIS Scholarly Books. OASIS: Cape Town.

Co-author: Rural Transitions to Higher Education in South Africa: Decolonial Perspectives (2021). Routledge: London.

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Dr Jessica Pool is a Senior Lecturer in the Centre for Health Professions Education (CHPE) in the Faculty of Health Sciences. In her role as Senior Lecturer, she is responsible for coordination and implementation of initiatives including the development of a scholarly approach to teaching and learning (SoTL), enabling discipline/subject-based teaching-focused communities of practice, promoting research-led teaching development workshops and promoting knowledge production and knowledge sharing about university teaching and learning. She has completed her PhD in blended learning, and her research interests include the development, implementation and evaluation of blended learning in a self-directed learning environment. More recently, her research focus has shifted to the development of academics as university teachers. She is the primary investigator in a registered SoTL project (Exploring the role of SoTL in enhancing professional identity of academics as university teachers) in which she is specifically exploring the role of SoTL in developing the professional academic identity of academics as university teachers. Publications include book chapters, refereed journal articles, non-refereed journal articles, reports, and book reviews. She is also actively involved as reviewer for conference abstracts and proceedings, and as keynote speaker. She is the chief editor for the previous book publication: *A Scholarly Approach to Student Success in Higher Education* vol 1.

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Dr Manuela Fernandes-Martins is a senior academic developer at the Centre for Teaching and Learning (CTL), at the North-West University, Vanderbijlpark Campus. She is currently the coordinator of the Scholarship of Teaching and Learning (SoTL) project, an activity funded from the University Capacity Development Grant (UCDG). The purpose of the SoTL funds is to provide academics and professional staff with an opportunity to research their own teaching-learning praxis in a scientific manner in order to improve teaching and learning as well as to expand their research and deliver research outputs.

Manuela is also the programme coordinator of the NWU's annual Teaching and Learning Conference as well as the Novice Teacher Awards coordinator part of the NWU's Teaching Awards programme. She is also the Quality coordinator for CTL, liaising with the Quality Enhancement Office, having participated in the coordination of soft reviews for support departments and in Internal Programme Evaluations (IPEs) of academic programmes as well as taking part in the Institutional Audit process. Manuela was also the coordinator of the Induction Programme for Academics; an opportunity aimed at enhancing NWU academic staff as university teachers, as part of their academic professional development.

Manuela is an accredited assessor and qualified in learning material design and development. She has also worked as an editorial assistant, lectured, and facilitated workshops for academics on lesson planning and for students on study skills; she also reviews for journals, and presents at national and international conferences. Manuela is the assistant editor for the previous book publication: *A Scholarly Approach to Student Success in Higher Education*, Vol 1.

Manuela obtained a Postgraduate Certificate in Education (PGCE) *cum laude* in Senior Phase and Further Education and Training (FET), in English and Computer Science (2006), in South Africa. She also completed a Foundation Teachers of English to Speakers of Other Languages (TESOL) Certificate (2007) at the Royal

School of Languages, in Portugal. In 2015, as a PhD student, she joined the NWU's Understanding and Processing Language in Complex Settings (UPSET) research focus area, in Applied Linguistics: English as a Second Language (ESL).

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Dr Mariëtte Fourie, with well-established knowledge, experience, and expertise in quantitative research design (including mixed method research), is the Quality Manager for all academic programs and offerings at the North-West University in South Africa. Dr Fourie is an affiliated researcher of the Education, Learning and Brain Sciences (E-LaBS) in the School of Education, Drexel University, and was appointed as subject matter expert for Drexel University in Mind, Brain and Education sciences and the Learning Sciences during 2020 and 2021. She assisted in developing various course content in the Higher Education Leadership Program. Dr Fourie has presented numerous professional development workshops on teaching, learning, and assessment nationally and internationally. Dr Fourie's expertise further includes Higher Education Research and Development, Scholarship of Teaching and Learning (SoTL), and the Continuous Professional Development (CPD) of faculty. Her DEd study developed the MEIPAC (Model to engender information processing ability in the classroom) and included the theoretical frameworks of Positive Psychology, Cognition, and Educational Neuroscience. As part of her master's degree in Educational Psychology, she developed the SELOC (Teacher Efficacy and Locus of Control Scale). Dr Fourie retains more than 20 years' experience in education and is an international facilitator for the Online Learning Consortium. Dr Fourie's immersed research interest enables her to continuously contribute to the interrelated and

interdisciplinary fields of educational neuroscience, educational psychology, and neuropsychology. Dr Fourie regards herself as a critical realist, mapping the ontological character of social reality. Her professional character portrays a strong disposition towards social justice and transformation in higher education. Her research is further inspired by the epistemic becoming of students in higher education. Her current research focuses on the provision of epistemological access in HE disciplines focusing on epistemic cognition and assessment. Dr Fourie is rendering support and professional statistical analysis to postgraduate students and academics, as well as national and international studies for over 10 years. Dr Fourie is a co-investigator of five international studies led by the Online Learning Consortium, as well as Drexel University, in the capacity of a quantitative research expert.

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Zander Janse van Rensburg is a lecturer in the North-West University's (NWU) Academic Literacy Department (South Africa), where he contributes to the Institution's academic writing development strategy. In accordance with this strategy, he also established the NWU Writing Centre in 2014, where he still serves as manager. In 2019, the Registrar appointed him as the university's subject specialist on plagiarism. His work, in this regard, focuses on forensic investigations into misconduct at all levels of academic practice. For these purposes, he has also led the development of specialised forensic software aimed at investigating various forms of academic misconduct. Further research interests include philosophical inquiry and, more specifically, hermeneutic phenomenology.

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Dr Heymans obtained her PhD in Education Management at the NWU in 2016. In her dissertation, she focused on mentoring school leaders in mentoring programmes. She also obtained a Post-graduate Diploma in Higher Education (cum laude) in 2017 and her MHS in Health Professions Education (cum laude) in 2021. In October 2017, Dr Heymans was appointed as Senior Lecturer in the Centre for Health Professions Education (CHPE). In the CHPE, she is responsible for the teaching of a second-year, fully-aligned module presented on all three campuses of the NWU. She also works closely with lecturing staff interested in enhancing the quality of their teaching and learning and researching their teaching practices through SoTL research. Her research focuses on health professions education in the higher education context, with specific reference to the Scholarship of Teaching and Learning, professional staff development, enhancing student engagement, large-class teaching, interprofessional collaborative learning, and team-based learning (TBL).

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Dr Christmal Christmals is a young scholar in Health Professions Education and health workforce policy niche areas. Dr Christmals is a consultant for the World Health Organization (WHO) on health workforce education and policy. Dr Christmals currently serves as the Chair of the Health Professions Education Scientific committee and a member of the Human Research Ethics Committee (HREC) of the Faculty of Health Sciences, North-West University. He is responsible for postgraduate research supervision and management. Prior to joining the North-West University, he was a Postdoctoral Research Fellow at the Department of Science and Technology-National Research Foundation funded South African

Research Chair Initiative (SARChI)-Chair for Research on Health Workforce for Equity and Quality, Centre for Health Policy, Wits School of Public Health where he worked on a comparative analysis of health professions leadership and governance between South Africa and Ghana. Dr Christmals completed his Masters and PhD in at the University of Witwatersrand where he developed a Concept-based curriculum framework for Advanced Practice Nursing in sub-Saharan Africa. Christmals is an honorary lecturer at the department of Nursing Education, Wits University.

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Dr Musara Lubombo is a postgraduate research advising specialist at North-West University, Vanderbijlpark campus, and honorary lecturer of Development Communication at University of KwaZulu-Natal. His research challenges normative thinking in knowledge construction, and is sympathetic to a humanising pedagogy in postgraduate studies. Dr Lubombo has published articles on how Ubuntu can be usefully deployed in addressing Africa's social development challenges, especially in the areas of health, politics and now higher education.

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Susan is Professor of Lifelong Learning at the Graduate School of Management where she teaches on the MBA programme. Previously she was Director of Learning and Teaching for the Business School and prior to that Director of the University's Centre for Continuing Education. Before joining the University of Auckland Susan was Professor of Organisational Studies, Director of the Centre for Learning and Innovation in Organisations, Director of the Centre for Learning Research, Research Director of the Centre for Learning Development and Deputy Director of the Health Services Research Unit at UK Universities. She researches learning and teaching in higher education and has an interest in student transitions and wellbeing.

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Agata MacGregor has a MCom in Insurance and Risk Management as well as a PGDipE(HE) in the field of Higher Education. Agata is currently registered for her PhD in the School of Education at the University of the Witwatersrand (Wits), Johannesburg, South Africa. She is a lecturer and Honours Coordinator in the Insurance and Risk Management Division in the School of Business Sciences (SBS) at Wits. She supervises Honours and Masters students by research in the field of Insurance and Risk Management. She teaches aspects of the economic theory of insurance as well as multiple areas in short term insurance. Agat is the Chair of the SBS Academic Integrity Committee and serves on a number of other committees including: Teaching and Learning Committee and the Faculty Postgraduate Writing Committee. Agata was part of the team who won the Wits Vice Chancellor's Team

Teaching Award in 2020 for innovative assessment practices. Her research interests include specialised liability risks and insurance regulation. In addition, she has research interests in social theories of learning in higher education, assessment-as-learning, curriculum studies and Legitimation Code Theory (LCT).

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Dr Raymond Emekako is currently appointed as a Senior Academic Developer at the Directorate for Faculty teaching and Learning Support at CTL coordinating three programmes: pedagogy, faculty awards and postgraduate support for enhanced throughput (UCDP funded) as of 2020-21. The coordination of these programmes and projects is timely at a moment the Centre is going through transformation in respect of how staff are positioned, how programmes are redefined to be informed by the principles of academic development and research and how equity considerations are provided on resources. All in all, how impact is measured against goals and efforts. In the pedagogy programme, we provide support to issues that arise from an internal and external programme review and challenges raised under the Faculty Teaching and Learning Plans across faculties and support are provided that are research-driven with a team of academic developers and advisors. The Faculty Awards is a national and institutional requirement that rewards excellent teachers in higher education and in the context of NWU disciplinary excellent teaching are acknowledged and used as a form of evaluative pedagogy. The postgraduate support programme is dedicated to pipeline students and particularly blacks and female students. Pipeline students are those who have spent above the time required to complete a degree or students who have been tracked and identified with being “at-risk” at a particular juncture in their research studies. Activities are supported through workshops, walk-ins and writing camps to increase quality throughput and better their studying experiences. Academic development in the pedagogy is designed around students and academic staff. The Faculty Awards is purely of academic participation while the postgraduate support is for Honours, Masters and PhD registered students.

Prior to this, Raymond coordinated the Faculty Teams and Leads for CTL and offered workshops for academic staff and students.

A new direction is to be led by current research data in academic development and to publish these data in local and international journals as well as present such findings in teaching and learning and research spaces. Raymond presented in 2020 and 2021 on impact of one-on-one academic advising on students' academic development and also on links between asynchronous teaching practice and WILS and its implication for curriculum development in higher education South Africa. These papers are already accepted for publication in South African journals. Current work is now underway on pedagogies associated with postgraduate research support and teaching awards.

Published works in journals and book chapters are in the area of learner discipline, curriculum management and leadership in basic and higher education teaching and learning. Ongoing serial work is on advancing the teacher education WILS practice in South Africa, future pedagogies for today's higher education with focus to learning, teaching and supervision.

Dr Raymond is a full member of Microsoft, Institute of Information Technology Professionals South Africa and the Strategic Management Society of Nigeria and served as an executive member in HELTASA for one-term as special projects coordinator and convener for SoTL.

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CHAPTER 1:

The potential of Scholarship of Teaching and Learning research towards transformative pedagogies in higher education: An approach to ethical mindedness

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Abstract

Scholarship of teaching and learning (SoTL) presents the vital intersection between teaching, learning and research in the Higher Education context. However, ethical requirements applicable to SoTL research are mistrusted and remain a challenge. This results in lecturers not engaging in SoTL research towards transformative pedagogies. In addition, clear guidelines for ethics in SoTL are lacking. In this chapter, the authors critically reflect on ethical mindedness specifically relevant to SoTL research. The scientific gap identified in the literature implies the provision of more guidance on ethical

issues to enhance SoTL research. Applying ethical mindedness to SoTL research may provide a stronger coherence between the ethical application process and the scientific approach of SoTL. The study followed a qualitative research approach using design thinking as research methodology. This chapter provided ethical principles and guidelines to the wider SoTL community, including academics, academic developers, scientific committees and RECs to close this gap. Guidelines included aspects such as how to address the power relation in SoTL research, important aspects of informed consent and the process, autonomy to choose freely to participate or not, selection of participants, benefits and risk ratio, protecting participants and the integrity of the research as well as safeguarding data.

Keywords: Ethics, Higher Education, Pedagogies, Scholarship of Teaching and Learning, Transformation

Introduction and background

The identity of an academic as a university teacher is embedded in knowledge consumers, producers, and disseminators. This implies that the work of an academic involves being a university teacher and a researcher (DHET, 2018). According to the framework for academics as university teachers, these roles should not be in competition as they are equally important and interdependent (DHET, 2018). Literature suggests a lack of ethical mindedness amongst Scholarship of Teaching and Learning (SoTL) researchers as regards to ethical guidelines that apply to scholarly research. These guidelines are necessary as SoTL research adheres to the same scientific and ethics criteria as all disciplinary research (Pool & Reitsma, 2017).

In addition, a misconception related to SoTL context and specific approach of SoTL research by non-educational research ethics committees (RECs) is evident (Stockley & Balkwill, 2013). During an SoTL writing retreat offered as a professional development opportunity to academics at the NWU, these

gaps were confirmed by SoTL participants. Consequently, an Ethics in SoTL research workshop was conceptualised, developed, and presented. The purpose of this workshop was to focus specifically on the ethical issues related to the ethical considerations during each step of the SoTL research process and to create a sense of ethical mindedness. The envisaged outcomes of this workshop were to develop guiding principles for applying ethical mindedness in SoTL research. The workshop created a space where academic developers, academics and experts in RECs collaboratively and critically engaged in ethical mindedness in SoTL research. This led to valuable insights and a shared understanding of ethical principles in SoTL research that might lead to more SoTL research outputs. Providing collaborative spaces and professional development opportunities allows for academics who are passionate about engaging in a scholarly approach to teaching and learning in higher education (HE) to explore and discuss uncertainties and some burning issues and challenges in SoTL research.

The transformative potential of SoTL in higher education

This section emphasises the importance of engaging in SoTL research towards transformative pedagogies in HE. The development of SoTL in HE institutions in South Africa emerged from 2004 ISSoTL conference (ISSoTL, 2004). Subsequently, an increase in the number of SoTL initiatives is evident in South Africa and also at the NWU. SoTL is supported by the Department of Higher Education and Training (DHET) and is an integral part of the framework for academics as university teachers (DHET, 2018).

SoTL provides an opportunity for academics as university teachers to conduct scholarly inquiry into teaching and learning processes in HE contexts. The overall intention of SoTL is to focus on expertise in HE teaching and learning,

thus improving student learning and enhancing educational quality through evidence-based and methodologically sound research (Huber & Hutchings, 2005; McKinney, 2007, 2012). Kreber (2013) postulates that SoTL contributes to the broader vision of university teaching through the commitment to serve important interests of students, not only for their academic learning and personal flourishing but also for creating greater social justice in the world.

In support of Kreber (2013), the draft Ministerial Statement on the implementation of the University Capacity Development Programme (UCDP) advocates for transformation and social justice in HE. The Ministerial Statement further argues that promoting SoTL is one example of a vital intersection between teaching and research because it provides an opportunity for academics to conduct scholarly inquiry into teaching and learning processes in HE contexts (Department of Higher Education and Training [DHET], 2019). Therefore, research and teaching development should be viewed as equally important imperatives for the success of the HE system (Department of Higher Education and Training [DHET], 2019).

In the context of HE, and specifically at the NWU, a scholarly approach to student success is regarded as necessary to ensure pedagogical best practices (NWU Teaching and Learning Strategy, 2021–2025). This implies the adoption of pedagogical best practices, as opposed to practices aimed only at the transmission of knowledge. However, pedagogical best practices have been challenged by the COVID-19 pandemic. In the context of remote online teaching and learning, best practices in HE from a student, lecturer and professional staff perspective are needed to enhance the virtual teaching and learning experience. It is required of academics as university teachers to engage in pedagogical innovation regarding teaching and assessment strategies in their classrooms. SoTL research could enable pedagogical innovation, as it encapsulates reflection on and transformation of teaching

and learning practices and, therefore, provides a vital intersection between teaching and research. This also aspires to the overall theme of this book – “A scholarly approach to student success in HE within the context of one of the subthemes: Academics as university teachers”.

Beyond the transformative potential of SoTL in higher education: Adopting an ethical mindedness

In reaching a shared understanding of the ethical implications for SoTL research, this section elaborates on the possible reasons for engaging in SoTL research towards transformative pedagogies in HE being absent. Amongst others, SoTL researchers are of the opinion that scientific evidence required by REC's are hindering SoTL research (Cleary et al., 2014; Reed, 2007; Stockley & Balkwill, 2013). SoTL researchers find that the ethical criteria are incompatible for SoTL research and, therefore, are lacking trust in the ethical approval process. The literature also reports that, because of the misconception about SoTL research, ethical clearance is perceived as perplexed, tedious, and not applicable to SoTL research (Linder et al., 2014; Stockley & Balkwill, 2013; Hally & Walsh, 2016).

The authors argue that providing practical principles and clear guidelines for ethics in SoTL research may address the misconceptions and confusion about ethics in SoTL research. This dilemma is confirmed by Pool and Reitsma (2017:39), who stated, “[d]espite expanding engagement in Scholarship of Teaching and Learning (SoTL), clear guidelines for ethical criteria for SoTL, and the implementation thereof remain limited”. In their paper, they critically reflected on how ethical criteria applicable to SoTL impact lecturer engagement in SoTL. It is for this reason that the authors make suggestions on how to support SoTL research without losing the scholarliness and the impact it has on innovation in teaching and learning.

Therefore, the authors acknowledge a lack of evidence of principles and guidelines for ethics in SoTL research. In this chapter, the authors critically reflect on ethical mindedness specifically relevant to SoTL research. The scientific gap identified in the literature implies the provision of more guidance on ethical issues to enhance SoTL research. Applying ethical mindedness to SoTL research may support a better alignment between the ethical application process and the scientific approach of SoTL. This chapter aims to provide ethical principles and guidelines to the wider SoTL community, including academics, academic developers, scientific committees and RECs to close this gap.

Against this background, this study aimed to address the following compelling research question:

What principles and guidelines can be developed to address the misconceptions and confusion about ethics in SoTL research and to establish a sense of ethical mindedness?

Moreover, the aims of this research was to:

- explore the potential of SoTL towards transformative pedagogies in higher education;
- develop an understanding of the misconception and confusion related to ethics in SoTL research;
- develop principles, guidelines and ethical mindedness related to ethics in SoTL research.

Research methodology

A paradigm is a theoretical framework which is based on a certain set of beliefs which suggests practical frameworks for scientific activities (Bandura,

2001). This study followed a pragmatic approach by applying design thinking (DT). Design thinking is generally defined as a developmental philosophy, which includes a paradigm, methods, tools, and techniques relevant to DT. This study employed a wicked problems paradigm, which deals with the fundamental assumption behind DT. In the context of SoTL research, ethics remains a contested and ill-defined topic, as it relies on many interdependent factors, which often require a deep understanding of the stakeholders involved (Interaction Design Foundation, n.d.). Therefore, the researchers deemed DT as a suitable paradigm for this study. The research method of DT applied in this study refers to reflective practice, and the tools and techniques used to collect data include facilitated focus groups discussions, reflections, brainstorming, mind maps, and feedback sessions (Laursen & Tollestrup, 2017).

Qualitative data was collected during an online professional development workshop. The online workshop entailed information sessions, breakout sessions in groups with feedback, brainstorming, expert panel discussions, and input from scientific and research ethics committees. The study population consisted of academics and academic developers who registered for the workshop, and an all-inclusive voluntary sample was used. Informed consent was obtained in adherence to all ethical criteria. All data sets were transcribed by an independent person, to ensure trustworthiness. Thereafter, the data was thematically coded and analysed to develop an understanding of the misconception and confusion related to ethics in SoTL research as well as to develop principles, guidelines and ethical mindedness related to ethics in SoTL research.

In the next section, the research findings are discussed.

Research findings and discussion

Ethics in SoTL research

Ongoing discourses in the field of SoTL research relate to the following: (i) the need for ethical clearance due to the perceived non-scientific nature of SoTL research; (ii) academics are often of the opinion that gathering information from students in their classrooms is not defined as scientific research and, therefore, does not require ethical clearance; and (ii) SoTL research constitutes no risk.

A critical reflection is provided by Healey et al. (2013) which sheds light on the understanding of both SoTL and ethics: “SoTL is the process of exploring, researching, developing, refining, reflecting upon, and communicating better ways and means of producing, promoting, and enhancing scholarly learning and teaching in ways that are ethically reasoned and inclusive” (p. 24). This definition implies that SoTL research is scientific in nature and affects (i) institutional practice and educational issues, and (ii) human society (Healey et al. 2013).

This, in turn, raises the question as to what constitutes ethical mindedness in SoTL research. The Belmont Report explains the ethical nature of research when involving human subjects: (i) respect for persons, (ii) beneficence, and (ii) justice (Department of Health, Education, and Welfare, 2014). These three Belmont principles are further subdivided into 10 ethical principles for SoTL research, which are discussed in this section. These principles include power relationship; voluntary participation; informed consent; fairness and equity; autonomy and privacy; inclusive selection; risks and benefits; data storage and management. SoTL research at the NWU strives to support the Belmont principles. SoTL becomes ethical when researchers show personal ethical mindedness and function in an ethical climate (Healey et al. 2013) .

It is important to realise that there are always risks involved when conducting research with students as vulnerable participants. Furthermore, the research method applied also determines the risk level – for example, qualitative research methods such as interviews, personal reflection, and/or visual/audio recordings immediately indicate a higher level of risk.

The following section discusses 10 practice-based principles underpinned by ongoing discourses and the Belmont Report. It provides guidelines on how these could be applied to SoTL research. It is important to acknowledge the interconnectedness between the principles.

Guiding principles for SoTL Research

Guiding Principle 1: Power relationship

Occupying the role as lecturer and researcher – each with their own identity, values, and power association – creates an unequal power dynamic, thus a conflict of interest, placing undue pressure on students (Pool & Reitsma, 2017; Schnurr & Taylor, 2019). As authority figures and gatekeepers to students' academic success, lecturers are in a position of trust and power. Lecturers may occupy different types of power, all of which can create a sense of fear. Lecturers have legitimate power, giving them “control” over others. Having coercive power, lecturers may dispense “punishment” to those who do not comply with requests. Having the power of reward implies the ability (implied or real) to pass or fail students. Power is perceived differently, and the power associated with an individual can influence the thinking and doing of others. Students, as a captive audience and essentially “trapped”, are dependent on the lecturer for their educational success (Pool & Reitsma, 2017). The unequal power dynamics (perceived, implied, or absolute) and the control associated with this position of power can create

ethical dilemmas such as coercion, undue influence, and a conflict of interest (Feroduk, 2017; Schnurr & Taylor, 2019).

The lecturer-researcher (hereafter “the lecturer”) must be ethical when including students as research participants (Feroduk, 2017). An ethics application and supporting documentation should show sensitivity towards and cognisance of the dual role and associated power relationships. Drawing on the risk analysis, possible conflict of interest (actual, potential, or perceived), dual role and power-associated risks and ethical dilemmas must be identified, and mitigating strategies must be included (Schnurr & Taylor, 2019). Strategies can include talking to colleagues to identify “blind spots” the lecturer may have regarding undue influence, coercion, power imbalances, and conflict of interest. Applicants should identify the power relationships present, acknowledge the inherent power differential, and the influence of race, gender, age, culture, etcetera, on the perception of power (Feroduk, 2017).

The use of a knowledgeable neutral, independent person(s) who is not in a position of power is advisable when engaging with the students during any research-related activities (Feroduk, 2017). Informed about the roles and responsibilities of the researcher and the independent person, the neutral person serves as a buffer between the lecturer and the students, which will help to protect the identity of students who are willing to participate or not (Feroduk, 2017). The researcher must train the neutral person(s) before the start of the research, as preparing them would protect the integrity of the research project. To enhance anonymity, the neutral person must remove any identifiable information from the data sets, and the use of a code list is recommendable (Feroduk, 2017; Schnurr & Taylor, 2019). Using online systems and software when collecting data from students can minimise the power relationship (Schnurr & Taylor, 2019). Data analysis should only start

when the lecturer has no further role to play in the teaching and learning of the student.

Guiding Principle 2: Participants should be fully informed

Principle 2 pivots around ensuring that participants are fully informed about the intended research, and based on the information, they can decide if they want to participate (or not) (Feroduk, 2017). Research ethics committees provide clear guidelines on the information that should be included for a participant to make an informed decision. In their ethics application, the informed consent form and applicable supporting documents, researchers should disclose the information participants need to make an informed decision regarding participation (Schnurr & Taylor, 2019). Before the research commences, prospective participants should be informed about the intended research during a research information session (Pool & Reitsma, 2017). It is also essential that participants have access to research-related information for their perusal. Such information could, for example, be uploaded to the learning management system (LMS). An independent and neutral person should facilitate the information session. Using a neutral person would reduce the power relationship associated with the dual lecturer-researcher role (Feroduk, 2017). Students are a captured audience and, therefore, the research information session should be mandatory and not interfere with academic time. Although an independent person facilitates the research information session, the researcher can still inform the participants of the intended research. However, a trained independent person should facilitate the informed consent process without the researcher so as to minimise the student–lecturer power relationship (Pool & Reitsma, 2017).

During the research information session, it is important that participants are informed about the aim of the research and that expectations are elucidated,

highlighting possible risks and risk-mitigation strategies (Feroduk, 2017) and explaining the direct and indirect benefits of participating in the research (Schnurr & Taylor, 2019). The researcher should inform participants that participation is voluntary, that they can withdraw before data anonymisation, and that there would be no repercussions for declining consent. The researcher must elucidate the data collection methods, who will access the raw data sets and provide insight into when the data analysis process starts (Schnurr & Taylor, 2019). The researcher must elaborate on strategies to ensure anonymity and confidentiality and must emphasise that only partial confidentiality can be ensured in the case of focus group interviews. Finally, the researcher should share information on the dissemination of the findings and the roles and responsibilities of the lecturer as the researcher and the independent person(s) (Schnurr & Taylor, 2019).

Guiding Principle 3: Autonomy to choose freely and privately whether to participate

Principle 3 addresses the ethical aspect of autonomy to choose freely and privately whether to participate in the research, refuse to participate, or withdraw from participation at any time during or after the research (provided that the data have not already been disseminated) after being fully informed. This implies ensuring that each student's decision to participate (or not) in the research is voluntary and that their privacy is protected when giving or declining consent. Researchers have an ongoing duty to provide participants with all information relevant to their ongoing consent to participate in the research. Therefore, consent should be maintained throughout the research project.

There is a specific way in which providing informed consent should take place for a face-to-face and online setting, allowing for autonomy. This could differ according to the specific REC requirements. Also, an important aspect to

consider relates to the time that elapses between the information given about the research and when informed consent is obtained. Therefore, sufficient time should be allowed for students to provide consent to freely and privately choose to participate.

All information pertaining to informed consent – including information videos, etcetera – should be uploaded to an LMS for the students to access, providing them sufficient time to familiarise themselves with the research. During the contact session, an independent person (no power relation evident) should explain the nature of the research, provide all relevant information necessary and should address any questions so that potential participants (students) are fully informed as explained in Principle 2. Informed consent forms should be signed by both the students and the independent person collecting these forms. When collecting consent forms from student participants in class, the forms should be designed in such a way so that all students sign and hand in the paper form in order to prevent knowledge of who is participating and who is not participating (e.g., explain that everyone signs the consent form, but those who do not want to participate can then draw two lines through their signatures). The signed forms are placed in a box, sealed in front of the last student by the independent person, who will then capture the data. Students who do not give consent immediately, have the opportunity to do so later during the research. Within the online environment, informed consent is obtained using an electronic form where all relevant protocols are followed. This implies that the students are still fully informed and have a choice to freely participate or not. Students are instructed to click on a link that takes them to the informed consent form. If a student then agrees to give consent by clicking “accept”, the terms and conditions are explained and the student agrees that they want to participate in the study and that they are fully informed.

The method of recruitment is also essential in ensuring voluntariness. In particular, how, when and where participants are approached and who recruits them are important elements in assuring (or undermining) voluntariness. In considering the voluntariness of consent, RECs and researchers should be cognisant of situations where undue influence, coercion, or the offer of incentives may undermine the voluntariness of a participant's consent to participate in research, as explained under Guiding Principle 1.

Different forms of data collection should be considered for the autonomy principle (i.e., to participate or not). For example, video or audio recordings may include students in one's class who have not provided informed consent to participate in the research. When using video recordings, consenting students should be given options. The first option may be that they give consent if the video recording will only be viewed by the research team; the second option may be that the video recording will be viewed by the research team and will then be shared during dissemination of the research findings. In addition, when conducting surveys, web-based survey tools (e.g., Qualtrics, etc.) that allow for students to participate anonymously should be used. Anonymous online participation eliminates personal identifiers and peer pressure and allows students who are not interested in participating to privately decline. Incentives (if offered) should be kept a minimum to avoid undue influence, and students should be provided with clear timelines during which they may opt in or out of participation in the study.

Guiding Principle 4: Decision to participate (or not)

Principle 4 addresses the decision of the student whether to participate in the research or not. Lecturers have the authority to conduct SoTL research in a specific module they teach. However, they must ensure that students have a choice as to whether to participate in the research. To understand this

principle, it is necessary to distinguish between normal compulsory teaching and learning activities and teaching and learning activities related to SoTL research.

RECs require researchers to clearly explain which activities are research-related and which are curriculum related teaching and learning activities (Bishop-Clark & Dietz-Uhler, 2012). This remains a challenge, as in many cases, there is no distinction between SoTL research activities and normal learning activities. The reason for distinguishing SoTL research activities from normal learning activities is to allow students a choice to participate or not. This implies that normal learning activities are compulsory, but the student has a choice as to whether the lecturer may use the data for SoTL research. Students who do not provide consent to participate in the research cannot be included in the study population. However, it is compulsory that students are still being allowed to participate in the learning activity towards improving their learning (Rowland and Myatt, 2013).

To further protect students as vulnerable participants, RECs suggest that data should not be collected during class time, as valuable teaching and learning time is lost if data collection is conducted during class time. The challenge remains that student participation significantly drops when data is gathered in separate organised sessions outside formal teaching time. This resulted in problems with too small sample sizes, or not being able to reach data saturation, impacting on the credibility of the data (Cleary et al. 2014). Cleary et al. (2014) further explained that students do not participate because they do not see the direct benefit of new or improved innovative learning, and this may have resulted in them not realising the importance of the SoTL research.

Guiding Principle 5: Inclusive, fair, and equitable selection of participants

Many human atrocities underlined by scientific experiments such as the Tuskegee syphilis study (Brandt, 1978), medical research in colonial Africa (Tilley, 2016), the Holocaust, and unethical vivisection triggered critical examination of ethical inclusion of humans in research. Just like research, research ethics has evolved over time (Dhai, 2014; Paul & Brookes, 2015), transitioning various industries and institutional boundaries – this includes the use of students and HE institutional information in scientific inquiry (Hassel, 2013). As discussed previously, due to the power relationship between the students and their lecturers, their age, and the assumed need to be successful in their assessment, students are considered a vulnerable group for SoTL research (Sykes & Dullabh, 2012). There must be a concerted effort by researchers and human RECs to ensure inclusive, fair, and equitable selection of such vulnerable groups in SoTL research (Department of Health, 2015).

The following should be considered in the selection of students in SoTL research: setting, risks, and benefits; vulnerability; inclusion and exclusion criteria; and the recruitment and enrolment process.

The setting and population for the SoTL research must be inclusive of those who would benefit most from the intervention during and after the study, and they must be fully aware of the benefits. Beecher (1966) established that many humans across the globe – and most commonly in the developing world (Harkness et al., 2001) – have experienced grave consequences secondary to participating in harmful experiments that they were not fully aware of. The benefits must always outweigh the risk before participants are allowed to participate in a study. Due to the stringent ethical requirements in the developed and industrial world, many scientists tend to use the developing world as a laboratory for experiments that they would not be

allowed to undertake in their home countries. It is essential that HE institutions and their scientific and ethics committees protect their students and groups of potential participants against such exploitations. The burden of the experimentation must be fairly distributed to the populations that would benefit from the study, and no experiment should be allowed for the development of products for another setting.

SoTL research may overburden students who already have full academic loads. Also, students are easily susceptible to pressure, especially when their lecturers are the researchers. The researcher must scientifically justify why such vulnerable groups are included in the study and must provide strategies to protect them from coercion. However, while protecting the vulnerable population, the researcher must also be careful not to overprotect (Sykes & Dullabh, 2012).

Researchers must evaluate their inclusion criteria to ensure that students are not excluded for non-scientific reasons such as funding, available time, and convenience. Researchers should vividly describe what participants are susceptible to potential risks of the study and the exclusion process (Sykes & Dullabh, 2012). The recruitment and enrolment process demands that the researcher applies the inclusion and exclusion criteria carefully, knowing well that biases may arise during the selection process which might make fair selection criteria inequitable. Furthermore, the timing of any remuneration should be carefully examined to ensure it does not introduce coercion of students.

In *Scholarship Reconsidered*, Boyer (1990) sought to create the culture of rethinking the classroom space as the laboratory for inquiry (Hassel, 2013). Participating in SoTL research is beneficial to the students, academics, and the institutions involved and must be encouraged by all stakeholders.

Guiding Principle 6: Benefits and risks of participating

Principle 6 explores the ethical principles surrounding the risks and benefits associated with participating in SoTL research. Non-maleficence underpins SoTL research and refers to an obligation not to inflict harm on others (Linder et al., 2014). Cleary et al., (2014) argue that any research with humans may hold risks and there may be the possibility of harm. Cleary et al., (2014) refers to “Risk” as the probability of harm when participating in research, and “harm” relates to anything that harms a participant’s welfare (Cleary et al., 2014).

Risk–benefit ratio analysis should precede any research with humans. Greeff (2016:1) explains that the purpose of the risk–benefit ratio is to “evaluate whether there is an ethically justifiable balance between the anticipated research results and any harm or inconvenience” that the research can cause any participant. Researchers should assess the probability, magnitude, and seriousness of harm. The risks involved in participating in the research will determine the risk category and levels (e.g., low, minimal, medium, and high risk) (Greeff, 2016). The researcher should identify any harm, whether physical, psychological, social, legal, economic, dignitary, or communal (Greeff, 2016). Ethics applications and supporting documents should contain the expected, potential and anticipated risks and harm categories, level of risk in every stage of the research, and the reason for risk should be justified (Feroduk, 2017). Researchers should further indicate how they plan to minimise the risk of harm and include mitigation strategies (Greeff, 2016; Linder et al., 2014). Before obtaining informed consent, participants should be fully informed about the expected, potential/anticipated risks (Cleary et al., 2014). The benefits of participating should outweigh the potential risk of harm and the risk-benefit ratio should be a favourable ratio (Pool & Reitsma, 2017).

Cleary et.al., (2014) emphasise the value of SoTL research for current students as participants, for future students, the lecturer, the lecturer-researcher, the institution, the broader community, and SoTL funders. Benefits can be direct or indirect. Direct benefits positively affect the interest or welfare of the participant, while indirect benefits are benefits to the researcher, scientific field of knowledge, or the community (Linder et al., 2014). The researcher should disclose all direct and indirect benefits upfront in the ethics application and supporting documentation (MacLean & Poole, 2010).

Another essential element in SoTL research is the equitable distribution of research benefits. Researchers should avoid circumstances where one group of individuals are significantly advantaged or disadvantaged by participating in the study (MacLean & Poole, 2010). Pool and Reitsma (2017) highlight contesting arguments in literature regarding the award of incentives for participating in SoTL research. These authors emphasise that incentives should be appropriate for the time and effort spent participating, and advocate the use of a lucky draw voucher(s) as a token of appreciation.

Guiding Principle 7: Disseminating the results

Principle 7 outlines the dissemination of the research results. As discussed in literature (Fanghanel et al., 2016), there is a distinct difference between adopting a scholarly approach to teaching and learning and participating in SoTL. A scholarly approach (being a scholar) entails only being a consumer of other scholars' knowledge, whereas SoTL is evident of dissemination of research outputs (i.e., being a producer of knowledge). These research outputs take on a variety of forms inclusive of formal and informal outputs. Formal outputs may include peer-reviewed articles, book chapters, and/or conference proceedings and presentations. More informal research outputs

involve intra-institutional presentations, faculty seminars, subject group meetings, and workshops.

As an SoTL researcher, one has an ethical responsibility to inform participants of the relevant dissemination of the results. During the process of informed consent, students should be made aware that the results will be disseminated. In addition, when disseminating the results, careful consideration of the anonymity of participants and institutions is important. The manner in which the findings are presented (e.g., direct quotations of a small group of participants) might reveal the identity of participants. Another important aspect to consider is the format in which the particular results are shared – a journal publication will not necessarily be suitable for a student audience but rather in a visually attractive presentation or report. Principle 7 is an important ethical consideration, and guidelines as outlined above should always be clearly stipulated in the ethics application form.

Guiding Principle 8: Protecting participants' information and the integrity of the research project

Students and their guardians trust HE institutions to protect students' information and dignity. The protection of participant information and integrity is so essential to students, institutions, the Department of Higher Education, and the South African government in general, that many policies and Acts have been promulgated to ensure its implementation.

Major policies and Acts – such as the Post-School Education and Training Information Policy (DHET, 2019); the Human Research Ethics Committee (2021) Principles and Procedures; the Department of Health (2015) policy on Ethics in Health Research: Principles, Processes and Structures; and the Protection of Personal Information Act (POPIA) (Republic of South Africa, 2013) – prescribe the protection of personal information and dignity, simultaneously permitting the use of anonymised data for scientific, quality

improvement and policy purposes in South Africa. Researchers must be aware of all the principles and ethical codes of conduct enshrined in these policies and Acts to ensure the integrity of their scientific inquiry (“ignorantia juris non excusat”) (Rudy-Hiller, 2018).

Volitionists believe that a researcher, even if ignorant of the requirements, is liable to the negative outcomes (Rudy-Hiller, 2018). The NWU Human Research Ethics Committee and other credible committees require that researchers state clearly the procedures and strategies they will employ to protect participant information before, during, and after their studies (Department of Health, 2015; Human Research Ethics Committee, 2021). The Committee ensures that all participants in a study complete a confidentiality agreement, which makes researchers aware of their responsibility to protect students and other participants in SoTL research (Human Research Ethics Committee, 2021).

First, as SoTL researchers, we need to ensure strict adherence to all the information we provide to our participating students, especially the content of consent forms which makes us liable for breaches in participant information protection and management (Department of Health, 2015; Republic of South Africa, 2013; Staunton et al., 2021). Being mindful of data protection and confidentiality requirements of the REC provided to the participants through the information document is essential in ensuring the integrity of the research project and safeguarding the research data.

Second, researchers should state their strategies in meeting confidentiality requirements and explain if there are any foreseeable data disclosure engagements in the REC’s application documents and during the consent process with prospective participants.

Third, all the research team members should discuss practical confidentiality implications of the study and sign the appropriate confidentiality agreement. Personal identifiers collected during the research should be kept within the knowledge of only the research team. If data will be shared with any government agency, community or funders, participants should be made aware of it before signing the consent form.

Fourth, if breach of confidentiality occurs during the study, the researcher must inform the participants and explain the strategies put in place to remediate the situation. Breaches in confidentiality should also be reported to the ethics committee.

Globally, the integrity of many highly respected people, institutions, and nations has been ruined by poor information management. Therefore, it is necessary that researchers take the protection of personal information and data management processes seriously in their inquiry.

Guiding Principle 9: Safeguard and security measures to protect participant information and data

Data – primary or secondary, containing either personal or institutional information – need to be stored and protected for reference and research-integrity purposes. All ethics committees and research institutions have legal frameworks or policies on how data should be stored and protected and for how long researchers could store data. Data storage is an essential part of research integrity and ethical research in that a breach of protection has the tendency of breaching all other ethical principles – confidentiality, respect, anonymity, and dignity.

Many journals, funding organisations, and governments increasingly demand research data to be archived and shared with researchers across the globe (Bangani & Moyo, 2019) – for example, the National Research Foundation

(2015) Statement on Open Access to Research Publications from the National Research Foundation (NRF)-Funded Research. These requests demand countries to develop Acts and policies to safeguard research participants and their data. Different countries have different data protection laws – it is said that developed countries have stricter participant data protection laws compared to developing countries (Bezuidenhout & Chakauya, 2018). Understanding data protection laws in the research setting and the countries that the data will be shared with is necessary in planning and protecting participants' data (Adams et al., 2021; Department of Health, 2015). In South Africa, POPIA (4 of 2013) and the Department of Health (2015) policy *Ethics in Health Research: Principles, Processes and Structures* underline participant data protection in health research.

For effective data management, researchers need to ask themselves whether the data to be processed are necessary and proportionate as regards what, why, how, and for how long. Key principles on data storage and protection are presented below.

First, the researcher should provide their proposed strategies to safeguard participant information during and after the study to the REC's and the research participants. Second, soft copy data should be protected using encryption software and limiting access to data through the use of passwords protected computers and files. Third, all hard copies containing participant information, including signed consent forms, should be stored in a locked cabinet and the key should be protected. Researchers must also keep a log of research team members who have access to the data- all team members should sign a confidentiality agreement (Human Research Ethics Committee, 2021). Fourth, apart from student grades, examination scripts and teaching materials that need to be retained for academic purposes, all research data

containing participant information should be destroyed after the research in accordance with the REC policies and procedures.

Whether intended or not, it is criminal to allow participant (students) data to be leaked. Sensitive data (political, religious, genetic, medical, etc.) could lead to lifelong damage such as stigmatisation. Researchers, therefore, need to take actions to safeguard participants' data.

Guiding Principle 10: Approval for the use of secondary data

Data collected without a primary research intent or for the purpose of research but not covered by the original consent of the participants are regarded as secondary data (Department of Health, 2015; Tripathy, 2013). In many instances, such data form part of routine institutional processes such as teaching, learning, and assessment towards the fulfilment of the requirements for an academic degree or certificate. Other major secondary data sources include census, health records, and routine national surveys (Tripathy, 2013). Such data are held in trust by universities and other institutions, such as the Department of Higher Education.

The *Post-School Education and Training Information Policy* (DHET, 2019) is clear on the importance of secondary data in research quality improvement. The Department of Health (2015) was more specific on the processes and principles required for ethical use of secondary data, stating that “[r]esearch that relies exclusively on secondary use of anonymous information or anonymous human biological materials usually need not undergo formal ethics review, provided that no identifiable information is generated” (Department of Health, 2015, p. 43). It was also explicit that HRECs should expedite the review of proposals for secondary data use and explore the previous consent obtained, if any, for the possibility of covering the new use of the data or requesting new consent (Tripathy, 2013). In cases where the data are anonymous and the outcomes of the research would not expose the

institution or the participants to any potential risks, the committee can approve the study without requesting new consent.

Also, if the data contain participant information but can be anonymised, independent of the researchers, then there is no need for consent from participants. It will then be required that the data gatekeeper sign a clear agreement not to provide data with participant identifiers to the researchers. The ethics committee then serves as a proxy to the participants in granting consent in this case (Tripathy, 2013). Ethics committees, including the NWU Human Research Ethics Committee, require an approval from gatekeepers (the Research Data Gatekeeper Committee, in the case of the NWU) (Research Data Gatekeeper Committee, 2019) for full ethical approval of studies using secondary data.

First, the researcher should give clear reasons why they would need to use the secondary data and who owns the intellectual property rights to the outcomes of the study to be conducted. Second, applications for the approval of prospective studies should be done in such a way that data will be available for secondary analysis. Third, the researcher should state clearly the benefits the institution that hosts the data will gain from the study. Lastly, the researcher must be certain about the conditions of the secondary data being sought. For example, data may be collected over years, especially if one is investigating student outcomes over a period of time; extraneous variables such as change of lecturers may blur the results.

Finally, secondary data provide opportunities for researchers to conduct trend analyses and other studies that could prove vital for improvement in their teaching and learning methods and institutional policy. Such data are quick to use, less time consuming and cost-effective; however, secondary data may be less accurate and outdated compared to primary data.

Conclusion

This chapter affirmed the potential of SoTL research for transformative pedagogies in HE. The Framework for Academics as University Teachers (DHET, 2018) clearly stipulates that academics as university teachers should engage in pedagogical innovation regarding teaching and assessment strategies in their classrooms. This chapter highlighted that SoTL research could enable this pedagogical innovation. The chapter set out to develop an understanding of the misconceptions and confusion related to ethics in SoTL research. Furthermore, the scientific gap identified in the literature implies the provision of more guidance on ethical issues to enhance SoTL research and ethical mindedness. Practical principles and guidelines relevant to ethics in SoTL were provided in an attempt to close this gap. Guidelines included aspects such as how to address the power relation in SoTL research, important aspects of informed consent and the process, autonomy to choose freely to participate or not, selection of participants, benefits and risk ratio, protecting participants and the integrity of the research as well as safeguarding data.

A limitation of the study might be that design thinking as the main research methodology might not provide sufficient insight into the phenomena of ethics in SoTL research. A suggestion for future research ethical mindedness in SoTL could include individual or focus group interviews towards a more in-depth inquiry.

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CHAPTER 2:

Praxis of humanising pedagogy to enhance the throughput of postgraduate students in South Africa: A caveat

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Abstract

South Africa requires black intellectual leaders who are skilled in objective critical enquiry and possess powerful knowledge that enables them to dare invent the future. However, postgraduate throughput in South African universities is low and slow, especially among black South Africans. Scholars have attributed this to epistemic othering tied to the legacy of colonialism and apartheid that have systematically erased and kept 'other knowledges' and forms of social life invisible. This chapter is a dialectical analysis of the praxis of humanising pedagogy, an epistemological approach employed in the Higher Education (HE) environment to bring the student at the centre of their learning. The analysis employs auto-reflexivity from a humanist philosophical approach to knowledge production. The objective is to highlight some shortcomings of the pedagogy, which largely consist in its conceptualisation whose associated praxis favours to project and position black pipeline students as objects of pity. From this approach, the praxis becomes sympathetic towards compassionate handholding models of teaching and learning, which paradoxically entrenches the superiority of the Oxbridge research supervision tradition whose ontological grounding consists in a structured exclusion, marginalisation, concealment, and production of other knowledges and social life as inferior or non-existent. A potent risk that

emerges is possible aggravation of existing abyssal exclusions through reproduction of conformity to the logics grounding these erasures. The greatest undoing of deficit positioning is its lack of regard to 'funds of knowledge' that the students can bring into their own learning. Conversely, anchoring humanising pedagogy on affordances that a student's background can yield (for example highlighting individual strengths and critical skills such as good work ethic, commitment, and resilience, which together are critical for postgraduate success) can be humanising, empowering and catalytic for black postgraduate throughput in South Africa.

Keywords: Abyssal line; academic resilience; affordances of the hash past; black South African postgraduate; humanising pedagogy.

Introduction

*I am the wisest man alive, for I know one thing, and that is that I
know nothing
– Socrates.*

The post-apartheid agenda for Higher Education (HE) in South Africa revolves around the need for an inclusive system. Central to this agenda are deliberate efforts to challenge the physical and epistemological obscurity of black students who, as with postcolonial societies (de Sousa Santos, 2028) remain excluded from spaces of knowledge production. The ultimate aim is thus to increase the country's research-based knowledge especially among black South Africans (Botha, 2010). Postgraduate studies capacitate men and women with high-level skills for the knowledge economy in order for them to participate meaningfully in efforts aimed at finding solutions to social, development and intellectual problems. According to Barnard et al. (2018), introducing more skilled employees into the economy is an important path to development for many middle-income countries. In any case, the essence of education lies in its dual function, that is to facilitate citizen conformity to dominant structure or to conscientise citizens to act for change. As Paulo Freire (1970) puts it, education functions on one hand as an instrument to

facilitate conformity into (or at most fight for change within) the logic of regulation of the dominant system. On the other hand, education can be the means by which people can deal critically with reality by enabling them to discover how to actively transform their world (Freire, 1970). Knowledge, as de Sousa Santos (2018:25) acknowledges, facilitates “the struggles against abyssal exclusions [that] entail a radical interruption of the logic of appropriation”. de Sousa Santos further posits that knowledge, and being, operates together with colonialism and patriarchy “to produce certain groups of people and forms of social life as no-existent, invisible, and radically inferior” (de Sousa Santos, 2018:25). This, according to de Sousa Santos (2018) is called production of abyssal exclusions, or absences in society.

The epigraph above is a famous quote attributed to one of the Athenian philosophers, Socrates. Known also as the Socratic paradox, the epigraph conjures commitment to knowing, a distinct attribute of any researcher. Paradoxically, it may as well be a poignant epigram that captures the predicament that most South African postgraduate students find themselves, which according to Mouton and colleagues (2015) relates to their woeful under preparedness for postgraduate studies. Either way, the Socratic paradox constitutes a useful starting point for a discussion, as this chapter attempts to make, on critical challenges that accompany the praxis of humanisation pedagogy, an epistemological approach employed in the HE environment to enhance learning experience, retention and success of South African postgraduate students from marginalised backgrounds.

Why this discussion? Problem, aim and objectives

Humanising pedagogy has been normatively conceptualised as an educational approach whose organising principle and associated praxis of

‘compassionate teaching’ (Manathunga 2009) is grounded in the recognition of learner disadvantage to improve access, retention, throughput and learning experiences of students from (previously) marginalised backgrounds (Bitzer & Albertyn, 2011; Limbada & Kajee, 2021; Zembylas, 2018). This obviates teaching and learning environments and practices that are sympathetic towards handholding models, which paradoxically entrenches the superiority of Oxbridge research supervision traditions whose ontological grounding consists in abyssal exclusions (de Sousa Santos, 2018).

This chapter posits that such a deficit positioning of students unwittingly projects ‘poor black students’ as objects of pity. This conceivably risks the fostering of hegemonic assumptions that permanently cast black students within a deficiency syndrome socially, economically and even intellectually thereby facilitating conformity by “integrating the younger generation into the logic of the present system” rooted in historical and systematic marginalisation, concealment, and production of all knowledges (save for the Eurocentric) and social life as inferior or non-existent (Freire, 1970, 34). A key question that arises, which this chapter attempts to address, is how can the praxis of humanising pedagogy be implemented for the effective production of quality graduates among marginalised South African black students without entrenching the abyssal line?

To address this question, the chapter highlights conceivable risks that accompany this praxis, focusing specifically on black South African students in the postgraduate pipeline, hence its formulation as a caveat, a caution, or a warning. As a caveat, the chapter does not therefore seek to provide a prescriptive way to humanise postgraduate studies, not least because the praxis of education as a journey towards humanisation, as Freire (1970) contends, can neither be prescribed nor imposed. Rather, the intellectual contribution of this caveat consists in its potential to provoke a debate on

how postgraduate studies in South Africa can be humanised in ways that do not render the production of black postgraduates “an exercise in futility” (Waghid, 2015:3). Accordingly, the underpinning assumption here is that humanisation (Maluleka, 2020; Zembylas, 2018; Khene, 2014; Zinn & Rodgers 2012) should enable production of quality intellectuals and productive citizen South Africa requires.

The need for postgraduates in South Africa

South Africa continues to bear unsatisfactory postgraduate throughput rates, a situation that is increasingly troubling for both government and HEIs. Recent data from across the twenty-six (26) South African universities suggest that the country is unlikely to achieve the annual target of five-thousand doctoral graduates by 2030 (NPC, 2012; DHET, 2020). According to Mouton (2015) the target of 5000 PhDs by 2030 may not be met due to a leaky postgraduate pipeline¹. Postgraduate throughput data presented in the Ministerial Statement on the Implementation of the University Capacity Development Programme 2021 – 2023 (Figure. 1) indicates that while there has been an overall increase in both the number and diversity of graduates produced in South African universities between 2000 and 2017, the number of South Africans graduating from doctoral programmes relative to ‘foreign’ candidates studying at the same institutions is underwhelming.

¹ Postgraduate pipeline is a term used to describe a pool of students enrolled, retained and progressing in a postgraduate programme.

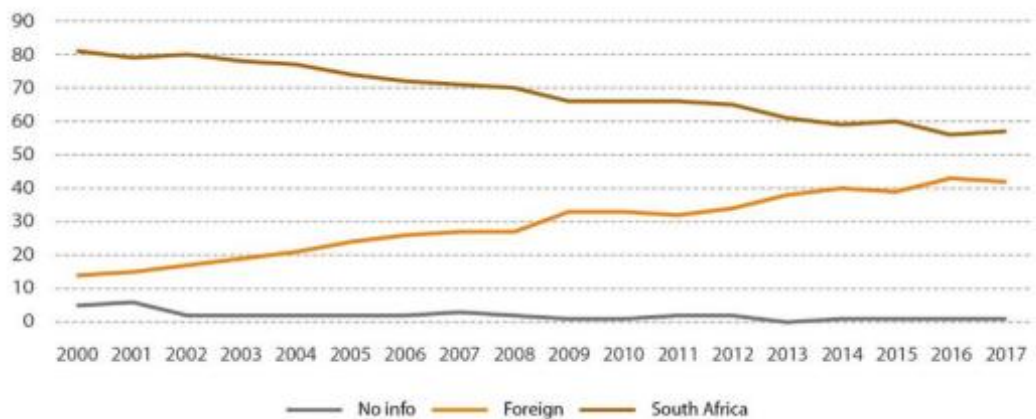


Figure 1: Nationality proportions of doctoral graduates from South African universities between 2000 and 2017 (DHET, 2020:9)

The proportion of non-South African doctoral candidates (marked in Fig. 1 as ‘foreign’) to that of South Africans graduating from the same institutions is diametrical. Various reasons have been cited for the slow and low throughput of black South African postgraduate students. In his characterisation of doctoral production in South Africa, Mouton (2015) lamented that the leaky pipeline of doctoral production owes to financial challenges, low progression and retention rates, and family constraints contribute. Other reasons include the schools’ inability to produce sufficient numbers of matriculants; the university system’s failure to recruit, retain and ensure effective progression; insufficient funding; (non) availability of, and where available third-rate supervision (Maistry, 2015; Mouton, et al., 2015). Also, poor student pre-research skills are known to have often resulted in attrition or more time being spent in the pipeline (DHET, 2020).

In light of the above factors, it is unarguable that ensuring wider physical access to postgraduate level can be sufficient to ensure increased throughput. However no positive co-relationship exists between wider physical access and progression at postgraduate (Guerin, Kerr & Green, 2015;

Wheelahan, 2012; Morrow, 2009). For this reason, any intervention that attributes the slow throughput of South African postgraduates to structural challenges only may not succeed in changing the above trajectory. This is especially so if the diametrical throughput ratios between South Africans and 'foreign students', some of whom share similar if not worst social and economic backgrounds is taken into consideration. A study reported in the University World News 2007 found that foreign students in South Africa comprised about 7% of enrolments at public universities (MacGregor, 2007). About two-thirds of these originated from the Southern African Development Community (SADC), with Zimbabwe being the major source country, followed by Namibia, Botswana, Lesotho and Swaziland (also see Mouton, et al. 2015). All of these source countries bear relatively worse socio-economic conditions than South Africa.

De-colonial thinkers, however, attribute the slow and low postgraduate throughput mainly to dehumanising epistemologies that are tied to the legacies of colonial disempowerment (Delport, 2016; Salazar, 2013; Wheelahan, 2012; Morrow, 2009). Thinkers aligned to this view suggest as a way of improvement the need to ensure social justice in HEIs. Social justice in HE includes the disruption of the 'cognitive empire' dominated by Eurocentric approaches to knowledge construction, replacing them with decentred epistemologies of the South that are inclusive, socially just and humanising (Mamdani, 1996, 2016; Mbembe 2001, 2016; Ndlovu-Gatsheni, 2013; Andreotti, 2011; de Sousa, Santos, 2018; Masinire & Ndofirepi, 2020). Together, these scholars isolate epistemic othering and inequalities that commonly mark social backgrounds of students as key drivers for this trajectory, hence the suggestion as a strategy for improvement to disrupt and replace such epistemic injustices with socially just epistemologies.

In addressing the central question in this chapter, consideration is given to vital skills that emerge from the bidirectional influences between an individual's agency and their environmental context as surmised by the bio-ecological theory of development (Bronfenbrenner & Ceci, 1994). According to Mgqwashu et al. (2020), critical 'funds of knowledge' can be produced through such past. They doubt if postgraduate research teaching and learning based on deficit-positioning can be the best way to enhance throughput of postgraduates who are highly skilled in independent critical enquiry and dedicated to its importance.

From an auto-ethnographic perspective (see Mgqwashu, 2009), an incursion into my unenviable lived experience of 'disadvantage' in rural Zimbabwe maybe be useful to demonstrate why this chapter aligns with Mgqwashu and colleagues' radical doubt against deficit positioning of learners.

A long walk: My journey through basic and higher education

I hail from a remote and marginalised area where I was born and raised in a peasant family. The schools I attended for my basic education are seven kilometres (7 km) away from home. This means that I had to walk 14 km daily, for eleven consecutive years, (seven in primary and four in secondary) to and from school. The image in Figure 2² prefigures the harsh conditions that marked my experience in basic education. At all stages of my educational

² The conditions under which I underwent basic education persist today in some parts of the country. This image was taken in 2021, at a different primary school in Mashonaland Central, in northern Zimbabwe.

career, the start and end of the journey was clearly defined, but the route unpaved, with no markings and signposts.



Figure 2: Physical, social, historical and material conditions underpinning my identity. (Picture courtesy of Lyndlin Masvaure, 2021)

As with the pupils seen in the image, I attended school barefooted. I started owning a pair of (second hand) shoes in my 9th grade. We had no classrooms. The few available had damaged roofs and floors, with no furniture. At home, I was expected to complete chores before and after school. For example, during the ploughing season (generally from late October to December every year, (the period that also coincided with end of year school examinations) we would wake up at around 0200Hrs and go to the fields, where we would be released for school just before dawn. After school, cattle needed to be

driven from the veld. Such is the life that I endured for the entire duration of my basic education.

At university, I also strived and coped within a very constrained resource setting. Access to computers, for example, was very limited and strenuous. One had to book a 45-minute slot at least a week ahead. Quite strangely, lectures were not compulsory so much so that one could bunk off as much as they like, and present only for examinations³. In this milieu, we had been made aware from the outset that marks ranged from 0 – 100. The irony here was that passing or failing the degree was a student's choice.

Interlocutors on social justice in education would, as they have mostly done, interpret the above auto-reflexive vignette from an abyssal thinking that associate's rurality with intellectual drought while urbanity (and proficiency in English language) is associated with intellectual ingenuity. However, post abyssal researchers such as de Sousa Santos (2018), Mgqwashu and colleagues (2020), Salazar (2013) among others have approached it differently. Mgqwashu and colleagues (2020) explored the generative effects of rurality on transitions in HE. Their study reveals how "the skills, experiences, and knowledges acquired in [low resource settings such as] rural communities and families might support higher education transitions and university learning" (Mgqwashu et al. 2020:946). Such background influences, for example, the development of student agency to overcome adversity, and ability to "improvise new ways of being [in their] epistemic becoming" (Mgqwashu et al. 2020:954). According to Salazar (2020), the

³ A certain group in my cohort spotted T-shirts inscribed "We DRINK daily and PASS annually". The group enjoyed independence through a free lifestyle mostly associated university sub-cultures.

hash past is a source of strength. It helps students' success in different ways. First it helps them with an internal drive (i-power) to find themselves or carve their identities from individual and community's strength and challenges. It also provides a 'culture of power' and 'power of culture', which means the dispositions, knowledge and skills students need to navigate unequal learning environments as well as cultural resources that impact student's ways of knowing respectively (Salazar, 2020).

With hindsight, I can attest that my present physical, emotional and intellectual dispositions owe to my experiences growing up. What sustained my educational journey is a combination of factors, which include determination to acquire an education that would transform my life. Growing up I had learnt that the unenviable conditions that marked our position in society owed to the lack of formal education by my parents. I grew up next to a family where my peers always changed shoes and uniforms every school term because their parents were teachers. That experienced sharpened my determination to obtain formal education.

The home chores, while encumbering my efforts to excel in school, were not entirely a disadvantage. They prepared me to persevere under difficult conditions, and also for what I later felt as a very soft landing at a South African university whose educational environment my colleagues found relatively unnavigable. My department used participatory methods of learning which involved body mapping and student led seminars. One would require self-discipline, focus and autonomy to succeed because the lecturers were almost always absent. When they were present, theirs was to facilitate student presentations, either individually or as groups. Through, my prior learning and the culture of power, I easily excelled in postgraduate studies. My Master's degree was obtained *summa cum laude*, and my PhD was

completed in record time, almost without correction. I had never obtained a first class in my previous learning in a rural and impoverished environment.

Mgqwashu et al. (2020) and Masaiti et al. (2020) posit that rurality can be a source of critical resources required for developing important dispositions and skills necessary for negotiating spaces at universities. These dispositions, which include agency, resilience, innovativeness among others were critical for my success at postgraduate. Background underpins identity formation, hence the need for its recognition, not erasure, through acknowledgement of the independence, agency and voice, which together constitute humanity of the student. Mis-recognition of that background, as Mgqwashu et al. (2020) contend, is tantamount to social injustice. It is from this perspective that this chapter is framed within a humanist understanding of postgraduate studies, which is located at the intersection of liberal humanism⁴ and Ubuntu philosophy, and whose purpose is to reclaim the humanity of the student. To ground this understanding, it is perhaps pertinent to characterise what postgraduate study is, and should be.

What is a postgraduate study?

A postgraduate qualification is an advanced study or a mode of knowledge-production that gives students an opportunity to produce knowledge through independent research. According to the University of Tasmania

⁴ I am aware of the reprehensible racism of many founders of liberal humanism – John Locke (1632–1704), David Hume (1711–1776), Immanuel Kant (1724–1804) and Georg Wilhelm Friedrich Hegel (1770–1831) - and how their work entrenched epistemic racism and seemingly lethally infected liberal theory. C.W Maris (2020) argues that liberalism appears to have since cleansed itself of the prejudices of its spiritual ancestors and cautions against an uncritical neglect of the distinction between genesis and justification.

(UTAS) website, candidates who elect to enrol in postgraduate programmes are ordinarily thought to be curious individuals who are driven by an inquiring mind, and have certain attributes that drive their passion to solve intellectual problems and advance humanity (UTAS, 2020). The first attribute is creative readiness or the desire to imagine the world differently (Wheelahan, 2012). For Thomas Sankara (2007) these are individuals who are daring to invent the future. Secondly, the student should be ready and able to be left alone to think (Mboti, 2018). This is the autonomy and independence that underpin andragogy, the philosophy of self-directed adult learning at postgraduate (Blaschke, 2019). Last but equally important is academic resilience, first propounded by Hall (1996), which enables a student to overcome complex realities that constitute adversities encountered in knowledge (re) searching journeys.

The aim of postgraduate studies is to cultivate a critical mind to enable a person to discover and carve an own personal individual identity and realisation of full humanity. While individuality is commonly associated with Western liberal thought, and inter-dependence with African sociability, carving identities through individual thinking is not foreign to Ubuntu. What Ubuntu - an African philosophy on the relational nature of persons (Lubombo, 2018) and the essence of what it really means to be human (Louw, 1998) - abhors is individualism not individuality (Sindima, 1995; Mboti, 2015; Maris, 2020). I-power (Salazar, 2020) and carving individual identities is not a liberal perspective as Maisty (2015) would suggest, but also an ideal which, from an Ubuntu perspective, can only be achieved through community both in harmony and through conflict (Mboti, 2015). Individuality and difference is inherent in Africans that are already multi-ethnic individuals who freely choose and shape their relationships in communities whose membership is marked by complex, messy and often undisciplined multi-ethnic interactions (Mboti, 2015). For Mboti, Ubuntu can thus be surmised simply as an ethics of

good African citizenship “based on independent thought and action, good sense, and informed choice in context” (Mboti, 2015:144).

A distinguishing feature between postgraduate and undergraduate study is that in the latter, success is measured by passing examinations. As Salazar (2013) puts it, learning at undergraduate results in pedagogical practices that not only favour high-stakes test-taking skills, foster memorisation and conformity, reinforce one-size-fits-all scripted practices, but also repress and silence students, leading to a decline in student efficacy in creating knowledge. Illustrating this point, Mboti (2018) likens examinations to an exalted form of a hide-and-seek children’s game where lecturers hide bits of knowledge in select places expecting brightest students to find what was put there. For Mboti, “the person-who-puts-things-there wants, and expects, students to know precisely what he or she knows” (Mboti, 2018:67). This suggests little or no creativity and agency in knowledge creation. The critique against rote learning is taken further by Jan McArthur (2014) who posits that such forms of assessment are inimical to critical engagement with complex knowledge, and do not translate into the social justice aspirations of higher education to enhance the individual’s ability to fulfil their potential within their social context. Such potential is possible through the following dispositions that measure success at postgraduate:

Independent thinking

Students who know only how to write exams make for ‘disastrous’ researchers (Tomaselli 2018:xx). This is not least because examinations, as with hide-and-seek, provide no room for independent thought and action (Mboti, 2018). Those with this experience (as with most black South Africans who attend schooling systems with increased class sizes and limited resources) suffer culture shock when they enrol in postgraduate studies

where pedagogy (which is traditionally associated with child learners) is replaced with andragogy (Blaschke, 2019). Instead of emphasising the presence of the teacher, andragogy advocates moral, emotional and intellectual autonomy as appropriate for postgraduate learning with mature adult learners. Here students are expected to engage independently in a real-knowledge production that goes beyond hide and seek to encompass that which is or was not meant to be known (Mboti, 2018). Independent thinking is seen here as both a method and goal of learning (Sinclair, 2004). The postgraduate world, as andragogy surmises, demands a state of creative readiness where the adaptive adult learner is left alone to think, reflect and solve problems. This is important as postgraduate researchers are not made to echo what was learnt as research apprentice but, as Botha (2010) argues, they are trained to become independent critical thinkers who can defend interpretive judgements.

Creative readiness

A creative mind is critical especially in doctoral studies where students are expected to make an original contribution to their subject area - often iteratively through trying out ideas, repeatedly, critiquing, getting lost, failing and correcting work along the way (McArthur, 2014; Mboti, 2018). A creative-ready mind is the one driven by curiosity, the desire to discover. Satisfying one's curiosity is the zeitgeist of research over the years, and an inherent quality for adult learners alongside a self-directing, self-concept, experience, and a performance-centred orientation to learning (Forrest III & Peterson, 2006). However, a recent study in South Africa revealed worrying cynicism amongst young scholars about the value of getting a PhD. A Department of Higher Education and Training (DHET) study on building a cadre of emerging scholars for higher education in South Africa (Burton et al., 2018) found that younger scholars are mostly driven by the need for

increasing marketability on the job market and upward mobility at work. Only established researchers were slightly more driven by the need to satisfy their curiosity. An analysis of a compendium of literature by Guerin et al. (2015) provides insight on the motivations for the increasing numbers of students opting to undertake postgraduate studies. Most undertake doctoral studies to enhance workplace relevance (Guerin et al., 2015; Burton et al., 2018), and very few are driven by a desire to contribute to the worlds of the future (also see Wheelahan, 2012).

Kamler and Thomson (2008) acknowledge that the emerging researcher enters an already occupied territory where there are “imminent dangers such as possible ambushes, barbed wire fences and unknown academics who patrol these territories” (Kamler & Thomson, 2008:29). Here, survival and success in such environments is a call for the most resilient. As with excitement and gratification upon discovery of new ideas; dreadfulness, panic attacks, anxiety, nausea, and even some madness are common feelings that cannot be avoided in the world of discovering knowledge, which is often guarded.

Academic resilience

The above conditions within which postgraduate pedagogic encounters take place render a postgraduate study as a mode of life (Mboti 2018) or a journey, which as Turner (1998) surmises, has a known starting point and destination, but has an unknown route. Such a conceptualisation implies values identified by Wingate (2011) as challenge, exploration, and overcoming obstacles, which together constitute resilience. Academic resilience refers to the capacity of a student to achieve learning outcomes despite adversity (see Beale, 2020; Cassidy, 2015; Theron & Theron, 2010; Wang et al., 1994). Research as a knowledge production activity is a ‘messy’

journey marked by a network of footpaths without clear markers on where to find knowledge. The researcher is vulnerable to mistakes, hard knocks, dead ends, disappointment, detours, frustration and failure. For McArthur (2014), in such moments of adversity, approaches to student learning that privilege greater individual agency should be encouraged. This is because such experiences are critical episodes that expose the researcher to independent thinking, problem solving, agency in shaping learning experience and liberation.

The decision to embark on postgraduate studies, as Hall (1996:163) puts it, “is accompanied by fears of intellectual incompetence, social isolation and difficulties in sustaining motivation”. Academic resilience as an attribute, allows a student to sustain their agency and learning experiences in potentially threatening situations, and enables them to bounce back from frustration and disappointment (Hall, 1996; Theron & Theron, 2010). People who elect to undertake postgraduate studies should therefore have an ability for self-direction and capacity to cope with difficult and unfamiliar situations to arrive, on their own, at difficult questions about the task-at-hand (Mboti, 2018). Resilience thus involves readiness to take on challenges and willingness to do whatever is necessary to achieve a goal; ability to bounce back from frustrations and anxieties; recovering from a blockage or from being upset and maintaining a commitment to learning.

Academic resilience is a dynamic developmental process that is ordinarily nurtured through availing resources and enabling caring connections such as familial, institutional, or socio-environmental support (Theron & Theron, 2010). This is the main concern of a humanising pedagogy whose guiding principle is recognition of learner disadvantaged, including different forms of inequalities and harsh past (Limbada & Kajee, 2021; Therborn, 2014). This leads into what Manathunga (2009) calls compassionate teaching strategies

advocated through a humanising pedagogy (Vorster & Quinn, 2017; Delport, 2016; Fataar, 2016; Keet, 2014; Salazar, 2013; Wheelahan, 2012) to improve access, retention, throughput and learning experiences of students from marginalised backgrounds (Bitzer & Albertyn, 2011; Limbada & Kajee, 2021; Zembylas, 2018). As argued in the following pages, an uncritical projection of 'poor black students' as objects of pity who cannot function in a competitive environment aggravates abyssal exclusions of the black intellectuals by perpetuating hegemonic assumptions that permanently cast these students within a deficiency syndrome.

Praxis of humanising pedagogy

Humanising pedagogy is an education philosophy attributed to the work and thinking of the Brazilian educationist Paulo Freire (1970) who lamented the state of dehumanisation in education. It involves students in a dialogue with their teachers in the co-construction of knowledge and reveres a critical, dialogical and praxical process that challenges students to be critically engaged as active participants in the co-construction of knowledge (Salazar, 2013). Simply put, humanisation in education can be understood as a philosophy that privileges teaching practices that use histories, knowledges and realities of students as an integral part of educational practise (Kajee, 2020). This philosophy is opposed to mechanical pedagogical approaches such as Dennis Fox's (1983) transfer theory and shaping theory which are considered distractive to meaningful learning as they silence collective voices.

This chapter grounds effective humanisation in the sociology of absences, which according to de Sousa Santos (2018:25) is 'a cartography of the abyssal line' that seeks to respond to the erasure / concealment, irrelevance, inferiority of the knowledges, modes of social lives and humanity of the

marginalised produced by monocultures that mark Eurocentric knowledge as a form of colonial domination. The idea is to reclaim those social groups and modes of social life that have hitherto been labelled primitive, ignorant or inferior. As de Sousa Santos (2018) contends, this sociology cannot be generative if enacted through a mono culture of valid knowledge transmitted by an all knowing and ever-present master. Accordingly, in the process of humanisation, students should not be manipulated but allowed to express their voices and consciousness. Here, students are not vessels or innate materials, but rather coinvestigators- in dialogue with their supervisors. This dialogue is pursued with the goal of developing critical consciousness, which is an ability to critically engage with disciplinary conventions, identify and address intellectual problems or act against undesirable problems of reality. This aligns with Freire's (1970) view of education as a practise of freedom. According to Kajee (2020), humanising pedagogy values students' background knowledge, language, culture, and life experiences and promotes respect, trusting relationships between teachers and students, academic rigour and learning contexts where teachers and students share power.

In South Africa, humanising pedagogy in postgraduate studies is largely a pedagogy of love (Kajee, 2020), a relational process on student retention and success associated with caring in education (Thomas 2012; Salazar, 2013). It incorporates values that, in the (South) African context are relatable to Ubuntu. These include co-existence, social harmony, solidarity, democracy, consensus, plurality, diversity among others, all of which are deeply seated in the extended family structure inherent in many societies in Africa. While comparable to other philosophic traditions such as Confucianism in East Asia, Ubuntu's African pedigree has sociolinguistic support in Nguni languages of Southern Africa in which the term Ubuntu - meaning humanness – exists in

its different phonological variants⁵. One finds evidence of the cardinal principle of coexistence, expressed through an aphorism ‘I am because we are; and since we are, therefore, I am’ throughout all corners of Africa from Dakar to Addis Ababa, and from Cairo to Pretoria (Lubombo, 2018).

Although humanisation in education is not new, the formula and methodological examples of its application appear not to be clear (Dale & Hyslop-Margison, 2010; Salazar, 2013). Indeed, as Freire (1970) notes, this pedagogy is not universally applicable. Be that as it may, the context in which humanising pedagogy can be applied for postgraduate supervision in South Africa becomes apparent. Advocates for the humanising pedagogy contend that supervision in this context must be conceived as a process of enabling epistemological access, which is inducting students into the new world of the knowledge community they are seeking to join. Here, student success relates both to the distinct qualities of the student and also to the extent to which the supervisor clearly reveals to, and collaboratively works with the student to discover ways of operating in the postgraduate life, that is for Hofstee (2006) knowledge of the process – what to do, how to do it, and when to do it.

In the context of the violent, exclusionary and unsustainable system within which the university is embedded that effectively dehumanised learners particularly those from marginalised backgrounds, reclaiming the humanity

⁵ Ubuntu phonological variants exist in many languages in Southern Africa, including all indigenous languages in South Africa. It exists in the following languages across Southern Africa: Sotho (Botswana, Lesotho), Shona and Ndebele (Zimbabwe), Kisukuma and Kihayi (Tanzania), Bobangi (Democratic Republic of Congo), kiKongo and giKwese (Angola), Kikuyu (Kenya), chiChewa (Malawi), shiTsonga and shiTswa (Mozambique among others. For a detailed discussion on this, see Kamwangamalu (1999) and Lubombo (2018).

of the student through a total rejection of epistemic racism that structure the existing university becomes critical for student success (Andreotti et al., 2015; Bitzer & Albertyn, 2011). Listening to students and building on their knowledge and experiences enables not only contextualised, dynamic, and personalised pedagogic encounters that further the goals of humanisation and social transformation, but also enables students to push the boundaries of knowledge and move across conceptual thresholds.

To develop high level skills in objective critical enquiry as well as access to powerful knowledge that, in Sankara's (2007) words, enables people to dare to invent their future, students should be able to see the world differently from the way they were accustomed to, and from the way they were taught. Only once learners have crossed conceptual thresholds are they better located to direct their own learning (Delport, 2016).

It is critical to note that humanising pedagogy is anchored on compassionate approaches that emphasise values of respect, trust, reciprocity, active listening, mentoring, compassion, high expectations, and interest in the student's overall well-being. Supervision is here envisaged as developing the student rather than the dissertation report (Khene, 2014; Maisty, 2015). It reverses a kind of supervision that, as Jansen et al. (2004:79) note, should cultivate both the knowledge to complete a research project "as well as the emotional, social, political and cognitive experiences that together constitute such learning".

It also reverses the idea that the pursuit of humanisation can never be an isolated or individualistic endeavour as "our being, is a being with" (Roberts, 2000:43). It emphasises caring connections in the production of knowledge where teachers and students recognise each other's existence, lived experiences and humanity while engaged in a collaborative effort to co-construct knowledge. This engenders mutual humanisation between a

student and supervisor, an educational practice that “requires the existence of ‘subjects,’ who while teaching, also learn, [unlearn and re-learn, and] who in learning also teach” (Freire, 2000:67).

The relational approach upon which the humanising pedagogy is rooted assumes that positive relationships with supervisors are social capital resources useful in the academic success. Applied from this perspective, humanising pedagogy orients towards an interventionist ‘hands-on’ type of supervision where the postgraduate student is hand-held to navigate the process. This approach is based on an assumption that the candidate does not possess all of the distinct qualities that predict success at postgraduate. A pertinent question that arises therefore relates to the effective praxis of this pedagogy in a way that does not compromise the andragogic practise and integrity of postgraduate studies.

Considering that some South African universities are already using humanising pedagogy as a philosophical underpinning to provide support for postgraduate students (Maistry, 2015; Gduld & Sathorar, 2016) to deliver on the mandate of the transformative agenda in South Africa higher education, critical self-awareness is needed. Three important issues emerge, which, if not mitigated, can pose what Waghid (2015) calls a serious epistemological threat to postgraduate scholarship, and possibly undermine the objective to produce quality highly skilled graduates South Africa requires. These include but not limited to the following three main risks upon which this caveat is premised.

Infantilisation of postgraduate students

Regardless of how much social capititation the positive student-supervisor relationship underpinning compassionate supervision may bring, pedagogic encounters in such environments tend to be marked by un-equal-power-

relationship that fosters continued obscurity of student agency while privileging superior knowledge of the supervisor. Such a pedagogic encounter countermands the nature and purpose of a postgraduate study to create independent thought among adults through encounters in environments where a teacher must be absent to avoid turning students into vessels (Fox, 1993; Mboti, 2018).

Caution must therefore be taken to ensure that the ‘pedagogy’ does not condemn the postgraduate student to perpetual infancy, conformity, uncritical mind, docility, acceptance and submissiveness to extant knowledge, a function of education set out early in this chapter. Depositing ‘a new set of knowledge’ into the student by the supervisor does not help the student to construct own pathways beyond the threshold they and their supervisor already have. At postgraduate, a student must not be afraid of loneliness, of getting lost, of making mistakes, and asking questions on their own because it is at these junctures that learning occurs. Such experiences and moments allow students to cross their conceptual thresholds, and it is only once one has crossed one’s conceptual threshold that they begin re-imagining the world, to direct their own learning and re-invent the future (Delport, 2016; Wheelahan, 2012).

Compassionate approaches are here accompanied by a conceivable risk of encumbering the student’s potential to discover real knowledge beyond that of the supervisor, and ultimately the creative potential to invent the future and re-shape the world. This, however, does not mean caring connections must be totally discarded. These networks of support must be used to optimise affordances of the past that helped these students to overcome adversity. Instead of projecting students as objects of pity, humanising pedagogy should project them as heroes who have capacity to, as they have already conquered adversity in the past. Such a projection has potential to

boost their confidence or what Salazar (2013) calls 'iPower', individual and community strengths and challenges that are an essential part of the student's humanity.

A positive positioning also un-brackets the black student from a deficiency syndrome that is automatically assigned by virtue of the 'disadvantaged' past. In fact, a student's past should never be projected as disadvantaged, as in some instances, it could be rich and self-enabling, especially in engendering academic resilience (Theron & Theron, 2010; Salazar, 2013). Understanding, engaging and leveraging affordances and strengths of the past, as with the deficit may help students establish mediating practices to mitigate adversity in HEIs. Optimising awareness that they have/can overcome adversity enables them to create own structures and communities of support. Even from a real Ubuntu perspective, individual (and communal) strengths and challenges are essential parts of the process of becoming more fully human. A meaningful humanising pedagogy should recognise the deleterious effects of unwittingly constructing students as deficit, especially on the self-efficacy and academic resilience. Moletsane (2012) decries that the deficit-based approach denies students agency.

Aggravating erasures, invisibility and inferiority

It should never be forgotten that ways of knowing, as Morrow (2009:78) posits, "cannot be supplied or 'delivered' or 'done' to the learner; nor can they be 'automatically' transmitted to those who pay their fees, or even to those who also collect the handouts and attend classes regularly". In any case, 'enabling epistemological access' and 'inducting the student' into normative ways of knowing leads away from agency and creativity. It implies that the knowledge already exists, and students just need to know how to join into the conventional process. Adult learners, as andragogy philosophy

surmises, learn better through self-direction (Blaschke, 2019). As Mboti (2018) posits, the work involved in the asking of difficult questions (knowledge discovery) must be confronted by the student with no option for delegation or outsourcing.

In fact, difficult questions - that a postgraduate student must ask - are the kind that a student arrives at on their own, and find answers to by themselves. This is not in the least because students must not be limited, as the hand-holding approach tends, to knowing what their supervisors know or allow to be known. While the role of the supervisor in self-directed learning should never be replaced (Dougherty et al., 2020), supervisors must as they walk along with those postgraduate students, still find ways to keep the student critically and actively engaged in the knowledge discovery process, and where possible even through radical ways that disrupt normative thinking transmitted through supervisors.

Some scholars have already urged for an exploration on how postgraduate supervisors can engage both in compassionate, teaching strategies that guide and support students' learning while at the same time engaging in rigorous and challenging debates with the student (see Manathunga, 2009). The fact that humanisation pedagogy surmises a supervisor as both a mentor and supporter on the one hand, and a gatekeeper of the discipline on the other, Manathunga (2009) urges for a discussion on both the cognitive and administrative aspects of supervision practise as well as its emotional and political dimensions. The outcome of this proposition is the humanist approach to philosophical inquiry that highlights the agency and value of human beings, both individually and collectively in the creation of knowledge. At postgraduate, this happens as pedagogical encounters underpinned by a sociology of absences, and in spaces where, as Mboti

(2018) argues, a teacher must be absent to avoid turning students into vessels waiting to be filled.

Meanwhile, a pedagogy of love advanced from an essentialist interpretation of Ubuntu emphasises as the essence of humanity interdependence at the expense of autonomy. I have argued elsewhere (see Lubombo 2018) that this is a simplistic and objectionable interpretation of Ubuntu that forgets that the subject of the aphorism “umuntu ngumuntu ngabantu” is the individual person (umuntu) whose aspiration is individuality. This individuality, however, can only be achieved through, and in collaboration with others. This view converges with an emphasis in the humanist approach to knowledge creation, that students should be allowed to carve own identities through independent research.

Compassionate handholding supervision approaches are deeply seated in apprenticeship models (Botha, 2010) inherited from the Oxford - Cambridge (Oxbridge) tradition. These approaches can easily lead into situations where supervisors work on students instead of working with them (Smyth, 1984), resulting not in the development of intellectual ingenuity of the student but in conformity whereby the student is taught to fight for change in terms of the logic of the imposed regulations. While students may want sympathy, support and guidance, they also need autonomy and respect as intellectuals. Obtaining these skills enables daring to invent the future through effective functioning in the knowledge economy. Failure to do this prefigures the dangers of compassionate teaching, especially when postgraduates who are not adequately prepared to work independently are involved.

Aggravating non-productivity among emerging academics

At postgraduate, greater individual agency is crucial. Here, commitment, interest and passion (Guerin, Kerr & Green, 2014:111) sustained through caring connections and affective emotional support (Theron & Theron, 2010) play an important role in helping students resist and reposition themselves within exclusionary structures (de Sousa Santos, 20218) persisting in a postcolonial university environment. Accordingly, those not optimally prepared for postgraduate studies struggle to participate independently in knowledge-production and can experience some creative slowdown. This often leads to spending more than the required time in the postgraduate pipeline. Here, the need for humanising pedagogy to provide some form of scaffolding to develop skills and competences, including academic resilience, required to reach the required exit outcomes becomes most crucial (Botha, 2010).

But what does the compassionate approach to supervision entail for students who may not be optimally prepared for the exigencies of academic rigour required at postgraduate studies? While there is a significant amount of evidence on the role of structural issues in slowing throughput, an analysis of throughput trends between the South African and non-South African students studying in same institutions could be instructive. It is conceivable that throughput rates might as well be influenced by factors internal to individual students. Such factors include motivation and determination.

According to Iwara et al., (2018), success characteristics inherent in postgraduate students who graduate on record time are grounded in three major contexts namely supervisory, institutional management, and personal standards. From this perspective, humanising pedagogy should consider students' individual attributes and agency as much as it does on structural

constraints. Ensuring wider physical access, epistemological access and material resources may not be sufficient to ensure progression without self-motivation, which, as noted by Burton et al., (2018) appears to be lacking amongst some emerging South African scholars (Burton et al., 2018).

According to Guerin et al. (2015:90) a mismatch between motivations for undertaking a postgraduate study and discovery of the actual experience and likely outcomes might contribute to incompleteness rates. Postgraduate, as Mboti (2018) argues, is a mode of life where students genuinely want and work towards becoming analytical thinkers and leading intellectuals. This is the purpose for which South Africa should make of its postgraduate education, and the kind of researcher the country requires (see Guerin, Kerr & Green, 2015:115). A humanising pedagogy that fails to recognise this imperative might render the transformative agenda on higher education an exercise in futility. This not least because if overly idealised, humanising pedagogy can serve only to further entrench the docility, lack of curiosity non-productivity observed among emerging South African scholars (Burton et al., 2018).

Conclusion

The foregoing discussion evinces that the praxis of a humanising pedagogy to enhance throughput is a delicate process that needs to be carefully managed to achieve the intended outcomes. It was not the intention of this chapter to discuss throughput or effectiveness of the pedagogy. My concentration was to highlight some important blind spots that need to be checked during the process. While there is an increased call for a pedagogy that favours the deployment of novel and relevant approaches that account for student's material conditions, there are many other factors that are critical for determining success at postgraduate. These include among others the nature

and purpose of the postgraduate degree as well as the kind of researcher that an institution aspires to produce. The praxis of a humanising pedagogy tends to foster otiose and discredited master-apprentice relationship between supervisors and students. This can perpetuate hegemonic assumptions that elevate the superiority of Western epistemologies while continuously casting black students within a deficiency syndrome. This would be an undesirable outcome that effectively undermines the objective to produce academics who are curious, highly skilled in independent critical enquiry and dedicated to its importance.

The chapter has also cautioned against a fallacious believe that transformative learning at a postgraduate level can be achieved through assumptions and philosophies of care meant for teaching children. Sometimes postgraduate learners need to be left alone to think, provided that adequate mechanisms for social, psychological and financial support and clarity on the process are sufficient. The overemphasis on compassionate supervision models may render the production of more postgraduates in South Africa an exercise in futility. Anchoring student support on their strengths rather than deficits associated with their past can actually provide critical affordances such as independence and resilience, which are critical enablers for success at postgraduate and productive citizenship. Be that as it may, academic resilience remains a communal responsibility and not entirely an individual effort. The importance of caring connections provided through humanising pedagogy therefore need not to be completely undermined. More reflection is however required on the challenges that may accompany such a pedagogy in the production of autonomous scholars required to address South Africa's social, development and intellectual problems.

Further questions need to be asked on whether enrolment into postgraduate programs on the basis that funding, support and caring connections are

available is enough to produce critical thinkers and intellectual leaders the current South African society requires. The purpose and nature of postgraduate studies, and what constitute success demands a student with certain type of qualities. Further insights can be gained through examination of what exactly propels black African students through the pipeline in which fellow black South Africans spend more time, or quickly leak from.

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CHAPTER 3:

Preparing students for rapidly evolving futures: Using learning theory to inform pedagogical practice.

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Abstract

The chapter describes a framework used to guide university teaching staff as they attempt to respond to emerging trends in the capabilities they want to develop in the students they seek to serve. The framework was developed in New Zealand through a national project involving five universities responding to a need to prepare graduates for uncertain futures. It draws on a range of theoretical perspectives to identify four summarising shifts in practice to guide academics in their course design and teaching. The chapter begins by describing trends in what and who universities are teaching. A conceptual analysis of selected learning theories is offered and the implications for shifts in practice are captured. The framework aims to support teachers as they shift their mindsets from disciplinary knowledge and traditional-age students to generic capabilities development in a more mature and diverse student body. It encourages teachers to deliver aligned curricula that: enthuse learners; enable them to prepare by exploring their learning journey and; expand and then exhibit their capabilities. The academic development strategies adopted to promulgate the framework are described and evaluation outcomes shared. Finally, the chapter discusses the implications for higher education institutions' role in preparing graduates for their futures.

Keywords: Learning theory, higher education, pedagogy, mature learners, graduate capabilities.

Introduction

This chapter seeks to problematise the challenges universities face beginning by exploring shifts in both what and who universities seek to teach. The chapter progresses with an attempt to address the challenges identified. It concludes with overview of an academic development initiative which exposed university teaching staff to a modified approach to teaching and captured their implementation plans.

The overall aim of the research and thinking shared in this chapter was to address the following research question: What approaches to teaching would prepare students for lives and careers in a rapidly evolving environment? This over-arching question was approached through a series of sub-questions. Firstly, what are the implications of a rapidly evolving environment for what students need to learn and who universities will be teaching? Secondly, what pedagogical challenges might these changes bring about? Thirdly, how can theory and research inform the adaptation of teaching practices? Finally, can adaptations in practice be readily communicated to and applied by mainstream educators?

Changes in what and who universities seek to teach

The need to prepare students for their futures has been acknowledged for decades but what that is thought to entail is changing (Scott, 2016). Faced with an environment characterised by rapid change, our graduates are thought to need a number of future-ready employability and citizenship-related capabilities. There is a shift from an implicit belief that disciplinary knowledge, thinking and research will prepare graduates for their futures to an appreciation that graduates need something more if they are to be

connected, communicating citizens equipped to manage a sustainable but uncertain future (Gleason, 2018; Oliver & Jorre de St Jorre, 2018; Penprase, 2018).

It is thought that graduates need a daunting range of generic or capabilities, including being: flexible, collaborative, proactive, open to uncertainty, resilient, ethical, lifelong learners, able to self-manage, cope with and stimulate change and devise sustainable solutions (Bowles et al., 2019; Hirschi, 2018). What is more, they need to be able to apply and develop these capabilities in the future in situations that as yet cannot be imagined (Minocha et al., 2018). There is the notion that knowledge has a short shelf life and the skills to source, acquire master, create and forget knowledge are more important than its simple possession. It seems that higher education institutions (HEIs) need to provide transformational and high impact learning equipping students with the capacity to perform flexibly, adaptively and creatively in shifting landscapes to acquire and create new ways of knowing, doing and being.

Not only are there shifts in what universities seek to develop in their graduates, who they teach is expected to expand too. Universities originated as places where privileged youth undertook their final educational step before beginning their lives and careers. Even if aspects of university organization still reflect this genesis many of today's students are not privileged, particularly youthful or culminating their education (Connell, 2011; Kasworm, 2018). A more current vision of higher education is one where individuals may repeatedly return to learning, either to acquire formal qualifications or micro-credentials and either to update within their current profession or to convert to another possibly emerging field (Gleason, 2018; Palvia et al., 2018). These shifts mean that the student body continues to change. Students are increasingly likely to be older, credentialed, have

current or previous work experience, and combine study with life and work responsibilities.

Universities have accepted these changes at an institutional level, and their aspirations, graduate attributes, and strategic goals express a commitment to developing students' generic capabilities (Hammer et al., 2021). The proliferation of taught masters, conversion masters, micro-credentials and outreach attests to the concern with more mature lifelong learners. However, students are graduating without the generic capabilities employers require. This is a constant theme in the literature (Azevedo et al., 2012) and employers exhibit some consistencies in their views on graduates' shortcomings (Chhinzer & Russo, 2018; Cunningham & Villaseñor, 2014). Students also indicate that universities are not framing their efforts optimally (Jorre de St Jorre & Oliver, 2018) and have a range of expectations (Donald et al., 2019; Matthews et al., 2018; Wyllie, 2018). There appears to be a mismatch between universities' ambitions, which are lofty, and the mechanisms they have for developing generic capabilities, which seem modest. Authors identify challenges in operationalizing institutional aspirations including: identifying the desirable and achievable scope and standard of capabilities (Oliver, 2015), devising pan curricula mechanisms to support progressive development (Pham & Saito, 2019; Yorke & Knight, 2007), establishing how capabilities are evidenced and assessed (Hughes & Barrie, 2010; Oliver, 2015) and, finally and of most relevance to this chapter, how generic capabilities are taught (Chan et al., 2017).

Teaching challenges

Understanding of learning processes and the ways to teach have progressed in recent years, as have the learning technologies and media at teachers' disposal. Cognitivists and constructivists have influenced higher education

(HE) teaching practices (Biggs & Tang, 2011). They revealed that new understandings are constructed from previous conceptions and point to a process of active construction, noting the superiority of active learning over passive learning and the need to provide learners with opportunities to think, reason and develop internalised working theories (Prosser & Trigwell, 2013). Equally, researchers suggest that not only should learning be active, it should also be social (Davis et al., 2010) and relational (Ramsden, 2003), giving students time to voice their ideas and interact with others (Laurillard, 2013). Within the HE Sector, many academics are familiar with active and social learning and with the concept of constructive alignment and backward design (Biggs, 1996), where assessments must align with teaching and address explicitly defined learning outcomes.

The thinking summarised above and which informs teaching has been developed through research and practice primarily to inform the learning and teaching of conceptual understanding. There are grounds to ask whether these approaches will similarly afford the development of generic capabilities involving soft skills, attitudes and values. Indeed, it would appear naïve to assume that the pedagogies which serve to instil disciplinary knowledge and thinking are also fit for developing more generic, softer but more relevant skills, attitudes and values. Equally, it might be naïve to think that the pedagogies designed for full-time school leavers will be suitable for part-time, busy working professionals attending short or long courses and at introductory or highly specialised and advanced levels.

The challenge of developing generic capabilities

Chan et al. (2017) identify the main themes that challenge teachers attempting to develop generic capabilities. They are: lack of support from institutions, weak curriculum frameworks and professional development;

operational challenges in conceptualizing, teaching and assessing generic capabilities; and teachers and students varying perceptions of generic capabilities. It seems that the antecedents predictive of effective acquisition of conceptual knowledge are not similarly predictive of socially and attitudinally mediated capabilities (Chan, 2012). There is also the issue of confidence. Most academics would feel comfortable teaching concepts fundamental to their discipline but would be less sure about teaching and assessing generic communication, critical thinking, problem solving and collaborative skills (Sloan & Porter, 2009) let alone the relatively untouched notions of, for example, proactivity or inventiveness (Bunney et al., 2015; Tymon & Batistic, 2016). Not only this, although the superiority of active over passive learning is established, it seems that the techniques used to enhance interactivity, social interaction and experience in lectures may have little impact suggesting teachers need a more in-depth understanding of active learning even when it is knowledge rather than generic capabilities being taught (Baeten et al., 2010). If the university curriculum is broadened to include generic capabilities and the outcome of university study includes the ability to apply these capabilities flexibly, creatively, and responsibly within a future that does not yet exist, there is ample evidence for revisiting pedagogies.

The challenge of teaching mature post-experience learners

Mature students at university are recognised to face a range of educational challenges (Butcher et al., 2020). Early literature focuses largely on mature students who missed out on university when they left school (Kasworm, 2018). These students were identified as being more likely to lack confidence, skills and recent memories of younger students (Fragoso et al., 2013). The current trend in catering for post-experience learners means that some

mature students are returning to university rather than enrolling for the first time (Bash, 2003). They may be highly successful and experienced learners. The evidence is of diversity, with a range in levels of confidence and learning skills (Young, 2000) and to the extent that learning and technologies have advanced, returning learners' knowledge of the workings of universities is likely to be outdated (Connell, 2011).

The diversity of mature learners presents teachers with both challenges and opportunities. It means teaching to the middle ground runs the risk of leaving a substantial proportion of learners behind and not exposing another portion of the class to anything new. On the other hand, mature learners may be more engaged, independent and autonomous (Richardson, 1994, 2013). They are probably used to living and working independently and juggling several priorities (Marandet & Wainwright, 2010) and may bring their enriching experience and observations to class (Trueman & Hartley, 1996).

Researchers find university social and support systems are targeted naturally at a younger audience (Butcher, 2020) and are sometimes not appreciated by mature learners as being appropriate for them meaning attendance and a sense of belonging suffers (Erb & Drysdale, 2017; Kahu et al., 2020; Lubbe et al., 2020). Finally, mature students are more likely to be studying part-time, off-campus, and while working (Lowe & Gayle, 2007; Osam et al., 2017). This means they may be less able to embrace co-curricula opportunities and find attending scheduled classes difficult (Lindqvist et al., 2020; Mckendry et al., 2014). If university programmes are to cater well for more mature and diverse learners there is, again, ample reason to revisit the ways educators facilitate learning.

Using theory to inform teaching practice

Learning being ubiquitous is unlikely to ever be explainable within a single theory, but there are theories that may shed light on how pedagogies can be enhanced. In the sections below, the insights offered by a range of theoretical perspectives are briefly explored. Consideration is made of experiential learning theory, thinking on the transfer of learning, adult learning theory or andragogy and transformational learning. The section begins by covering approaches to active and social learning which have been applied to the development of generic capabilities.

Learning theory and developing generic capabilities

Notions of active, social and constructivist learning which inform many teachers' efforts to develop knowledge and cognition have also been applied to the teaching of generic and applied skills and attitudes and the teaching of mature adults (Pitsoe & Maila, 2012; Rutt et al., 2013; Virtanen & Tynjälä, 2018). These approaches alert teachers to the importance of learners: setting goals (Miller, 2018); feeling confident in their ability to succeed (Bandura, 1997); being motivated to learn (Chan & Yeung, 2019); engaging in reflection and receiving feedback (Tannenbaum & Cerasoli, 2013), being self-aware and engaging in metacognitive thinking (Tynjälä et al., 2016) and in being skilled learners (Chan, 2010). Learning with others seems to be more successful than learning alone (Chi et al., 2008; Johnson & Johnson, 2002). Dialogue is a recognised vehicle for learning and when it comes to creative learning, invention and knowledge creation, knowledge can emerge as a collective created and understood by a collaborative group.

Authors point to the need to attend to the characteristics of learners, the learning process and the product of learning (Chan & Yeung, 2019; Kember et al., 2020). It seems that without a learner-centred approach to generic

capability development, little will be gained (Green et al., 2009) and that active learner-centric approaches differentially benefit marginalised learners (Theobald et al., 2020).

Within applied disciplines at university, active and experiential approaches to teaching have gained traction (Kolb & Kolb, 2017). Experiential learning theory proposes an active learning cycle where learners work with a problem or skill to develop an idea, test it out in practice, reflect on outcomes, modify their working theory and then make further attempts (Kolb et al., 2001). Through a cycle of continuous trial and reflection, learners come to improve their performance. Experiential approaches highlight the importance of active experimentation in developing mental models, of the importance of errors, reflection, feedback and practice. It situates the learner as autonomous, active and theory building. They shift attention from conceptual learning to learning behaviours and skill development and are relevant here in that they examine learning when no predetermined solutions exist but when capabilities must be applied in practice to form opinions, solutions or skills. They also shift attention from teaching content to facilitating learning by creating opportunities for action and reflection.

If HE is to prepare students for their futures learning should sustain beyond assessment and graduation. However, variously termed learning portability, adaptability, generalizability, the transfer of learning has not been extensively problematized (Jackson, 2016; Roumell, 2019). Within the world of human resource development and professional learning it is a constant theme and something of a vexed issue (Baldwin et al., 2017; Ford et al., 2018; Grossman & Salas, 2011). Researchers contrast near and far transfer (Laker & Powell, 2011; Perkins & Salomon, 1992). Near transfer, when the learning context and the application context are similar, is more likely than is far transfer, where the learning context and the application context are

dissimilar (Laker & Powell, 2011). Noting that, if universities are preparing students for an unknown future in either the sense that they do not know where individuals will go following graduation or in the sense that the environment is changing so rapidly that it is impossible to anticipate what graduates will face, it is not possible to create the situations necessary for near transfer

It seems that teachers should be anticipating far transfer and here there is little emphasis on learning passively about the ideas of others. Instead, there is an emphasis on developing robust conceptions or schema in such a way that they inform future performance. The thinking is that in far transfer, it is knowledge of the underlying structure of concepts and strategies independently of context that is predictive of future performance (Alexander & Murphy, 1999). However, even when a relevant underlying structure is known transfer still cannot be assumed (Billing, 2007). The learning transfer perspective is valuable in that it shifts attention from the initial development of a capability to its future application and growth.

Learning theory and teaching mature learners

Much research into learning derives from studies of children and could be of dubious relevance to traditional-age students, let alone more mature cohorts. The notion of andragogy, or adult learning, was developed specifically to explain the learning of adults (Knowles, 1975; Loeng, 2018). The theory alerts readers to aspects of pedagogy that mature learners respond to. Though critiqued (Merriam, 2008; Roessger et al., 2020), this work exposes emotional aspects of learning and the importance of learners' motivations. Again, the emphasis is on active and interactive approaches, positioning learners as self-determining and the educator as a facilitative. Andragogists suggest that mature learners are independent, experienced,

ready to learn and are attuned to useful learning that can be applied (Karge et al., 2011; Knowles, 1975). These purported learner characteristics lead writers to suggest that adult learners thrive when: given choice and opportunities to direct their learning, they are actively involved in addressing authentic issues, where personal experiences can be brought to bear, and, they are treated with respect by teachers who enable rather than instruct (Wuestewald, 2016). Such notions are consistent with much of the research described above but are perhaps less consistent with mainstream practice in university.

Also, with an origin in the teaching of adults are theories of transformational learning. Hoggan (2016) suggests that transformational learning results in shifts in identity, a change in epistemological certainties and shifts in capacity and behaviour. These approaches seem highly relevant to the ambitious calls for educational systems that transform students. Transformational learning theory originates with Mezirow (1978, 1991), who suggested individuals have habits of mind which determine how they perceive the world, how they think and what they do. Transformational learning, according to Mezirow, necessarily entails perspective transformation, that is, becoming aware of one's own and others' habits of mind or filters and considering how appropriate or suitable they are (Mezirow, 2000). Mezirow asserts that the transformational learning process begins with a growing disorienting dilemma involving the realization that old beliefs are inadequate, which may result in feelings of resistance and a failure to transform or to a process of reflection, analysis and change (Mälkki, 2010). Reflection is thought to be a necessary component, with Kreber (2004), suggesting that reflection should begin with the premise, that is, thinking about the why before reflecting on the what or how.

Research supports an approach that brings the whole person to the learning, regarding the learner as an affective, intuitive, thinking, physical, spiritual self. For educators, this means engaging with students on who they are and how they feel and what they think. Educators stress the importance of trust-based relationships within the learning environment (Taylor, 2007) with equality, openness and mutual goals supporting learners in transformation (Eisen, 2001). Adult learning theories and theories of transformational learning shift educators' attention towards the needs and interests of learners. Approaches to adult learning suggest ways to shape the learning experience and environment. Transformational approaches highlight the ways deep-seated attitudes and values shape outlook and behaviours and the ways they can be developed.

Implications for teaching practices

In the sections that follow, the implications of the perspectives described above for generic capability development and teaching diverse mature learners are examined. The notion of curriculum alignment was posited as good practice in university teaching. In the sections below, these notions are enhanced and refined in the light of the research perspectives outlined above to arrive at a modified framework attuned to research on generic capability development and the needs of mature learners.

From sharing learning outcomes to commitment to learning

Current practice alerts us to the importance of developing clear learning objectives or learning outcomes. Students need to know what they are learning and teachers need to express learning outcomes which are then taught, observed and assessed (Biggs & Tang, 2010). However, developing

generic capabilities is identified as challenging, effortful, time-consuming and anxiety-provoking (Rutt et al., 2013; Virtanen & Tynjälä, 2018). Learners need to be motivated to develop (Chan et al., 2017). Transformational learning theory points to the risks of individuals failing to learn, explaining that when learning challenges established beliefs and attitudes and assumptions, learners can become defensive and retreat into old safer beliefs. Learning, they say, induces emotions that can trigger avoidance (Mezirow, 1991). The transfer theorists and advocates of experiential learning explain that learning builds on errors and error correction, but students may be reluctant to risk performance ‘failures’ (Darabi et al., 2018; Martin et al., 2013). If our students are to transform and acquire generic and flexible capabilities, then informing them of learning outcomes and explaining why they are important is insufficient to ensure the levels of effort and resilience necessary.

This line of thinking has important implications for teaching. It seems that motivation, attention and learning-related attitudes and beliefs can, to some extent, be enhanced through teaching and curriculum design (Williams & Williams, 2011). Designing curricula that are relevant, important and achievable is likely to lift engagement and so learning (Baldwin et al., 2017; Blume et al., 2010; Zepeda et al., 2020). It seems that unless learners believe that learning is possible, that is, they have self-efficacy, they are unlikely to invest effort in acquiring new capabilities (Bandura, 1997). Learners interested in a topic who have time to think about it are more likely to engage deeply and discover meanings and underlying schema. Equally, learners who see a course as relevant to their goals and identities will invest effort in learning and apply self-regulatory skills to their studies. These conditions can be stimulated by teachers who role model enthusiasm, explain the relevance of what is to be learnt, tell illustrative stories, build learner confidence and ensure, not just buy-in to pre-established course learning outcomes but ownership of personal learning outcomes. Students arrive at class with a

diverse set of attitudes and beliefs that shape their motivation and attitudes (Taylor & House, 2010). By finding out who they are teaching, teachers can be in a better position to build individual's self-efficacy, offer material and choices that students find appealing, create a safe place where students feel they belong and provide needed support during what might be a difficult and emotional journey (Fung, 2019).

From arranging content to preparing for learning

Teachers devote a great deal of attention to preparing content and to making their slides, handouts and lectures effective vehicles for sharing ideas. The approaches to developing generic capabilities above however placed little emphasis on this core activity of delivering a common suite of materials to a cohort of learners.

While students may have shared a common school-based curriculum for discipline knowledge influences determining their generic capability development are likely to vary widely. The work of the cognitivists highlighted the need to connect new learning with existing understanding. Thus, it is likely that the teacher's role should encompass explorations of topics and efforts to bring in relevant knowledge, attitudes and feelings and skills before any thought of content delivery can be contemplated. In a similar vein, educational content that addresses relevant goals or aspirations is known to enhance learning, but to form goals students must appreciate the connections between themselves and the topic to be taught and between the topic to be taught and the discipline and society (Fung, 2019). Workers point to the need to engage in pre-reflection covering why a capability is being mastered, how is it relevant to and its utility within the wider world and their lives. This is important since the ability to anticipate the future application of learning is predictive of transfer (Brown et al., 2013). Thus, it is

likely that teaching an increasingly diverse class has implications for goal setting and big picture thinking and for bringing past conceptions to play.

Learning was identified in the introduction to this chapter as one of the most crucial generic capabilities. If students are to be independent, creative, critical and self-regulating then it seems that these skills and attitudes need to be taught and practised (Richardson, 2013). Exploring a course through self-assessments and planning, exercises that expose faulty thinking and discussions that reveal contrasting attitudes, interpretations or emotional reactions serve to connect students to their learning challenge. These teaching strategies set students up to develop and apply the metacognitive strategies and self-knowledge they need to manage progress. Teachers may also need to develop their students' reflective strategies for exploring their own and others' beliefs and attitudes. Planning learning and thereby gaining an appreciation of the journey is likely to allow learners to exercise their self-regulation and metacognition in learning. Thinking, reasoning, dialogue and discussion are themselves skilled activities that may need to be taught as generic capabilities in their own right and as vehicles for learning.

Embedded within these preparatory activities must also be teaching threshold concepts, common vocabularies and essential techniques. These are the tools of capabilities development and the bedrock of disciplines. Some authors have lamented that, as teachers shift towards more experiential ways of teaching, somehow knowledge has been devalued (Green, 2010). However, students cannot apply generic capabilities without knowledge of content, context and process which, again, need to be explicitly taught (O'Connor, 2020). In a diverse class, foundational knowledge may vary widely, presenting teachers with particular challenges. However, unless students have grasped the fundamentals, they will be unable to progress beyond a superficial appreciation of a topic.

Thus, the approaches outlined in this document suggest a shift in emphasis away from exposing students to knowledge and towards preparing students for capability development through activities that enable them to form connections backwards to current conceptions, sideways to related topics and issues and forward to future aspirations. This, it seems, should be combined with the active development of the skills needed to talk about, reflect on, and build on foundational shared knowledge, vocabularies, concepts and techniques. Without a phase that 'tools' learners up for learning, generic capability development is likely to leave many people behind.

From learning about to learning to do and be

If HE institutions are to build generic capabilities, teaching cannot stop when students have grasped concepts, know why they are important and can write about them. Teaching must take students much further, assisting them as they learn to apply concepts flexibly and socially to create new solutions and navigate conceptual, behavioural and societal uncertainties.

To develop cognitive and practical skills or personal perspectives, research points to the importance of learners having time to think, discuss, reflect, rehearse, practice and challenge. Cognitivists refer to cognitive load showing that too much challenge impairs learning, leaving learners skimming the surface and struggling to cope (Hmelo-Silver et al., 2007; Szulewski et al., 2020). The social constructionists point to zones of proximal development showing how the support and carefully pitched challenge can lift performance (Musa & Abdullah, 2020; Wood et al., 1976). Other workers talk of desirable and undesirable difficulties (Bjork & Bjork, 2020). Whatever the terminology, authors are identifying that learning generic capabilities takes time, thought and practice. Billing (2007) similarly emphasises the mental

effort required for developing and applying schema and points to the need to develop high-quality learning materials and to manage content carefully if students are to learn rather than muddling through.

Active construction, negotiation and challenge through dialogue are identified as vehicles for building generic attitudinal capabilities and for achieving transformations in perspectives. Working in groups is seen to offer a range of opportunities that foster learning including accessing and evaluating a range of viewpoints, creating knowledge, getting and giving feedback, unearthing generic principles, testing ideas. The implication for teaching is the need to carefully design group activities so that students purposefully and fruitfully engage in social learning, working on targeted capabilities in pedagogically informed ways.

The work on transfer provides extensive insight into how students can be taught so they develop capabilities for application across contexts. It appears that learning must include multiple opportunities for working on targeted capabilities in varied ways (Marton, 2014). Too much variety in the early stages of learning risks learners not transferring concepts from one example to another. Too little variation later on risks learners not developing generalizable schema (Pang et al., 2015). Training on parts and whole of concepts or practices, drawing attention to the underlying structures and managing cognitive load is predictive of transfer. Relatedly, Taylor et al. (2005) report that using positive and negative behavioral models is superior to using either one. Other workers suggest variation in the difficulty of problems aides transfer (Brown et al., 2015), as does distributed rather than blocked practice (Dunlosky et al., 2013). Van Merriënboer (2002) found that introducing interference information and necessitating different causal reasoning for problems enhanced transfer. Such opportunities allow learners to develop more accurate schema by developing an understanding of the

nuances, boundaries and breadth and applicability of ideas. These are techniques that HE could readily adopt.

The implications are that teachers need to design multiple opportunities for practice, analysis and reflection. Individual or group activities that foster the identification of assumptions, conventions, or principles and provide experiences in varied application are critical in facilitators of transfer (Perkins & Salomon, 1992).

From assessment to performing flexibly

It is safe to surmise that future performance in life and careers involves the integrated use of multiple capabilities in concert and within social contexts. Transformational learning theorists note that performance provides students opportunities to self-authenticate and to develop and demonstrate their perspectives. Social constructionists argue that learning is demonstrated by participation in a community and developing a professional identity. These observations have implications not just for course assessment design but for the coordination of assessments across courses and modules.

Appropriate assessment of generic capabilities is unlikely to be about students having the opportunity to provide a 'right' answer or demonstrate a broad knowledge; it is more likely to be about opportunities for students to demonstrate abilities to devise multiple potential solutions and navigate new possibilities. Assessments of generic capabilities are likely to be about exhibiting mastery of both process and product and about demonstrating an authentic and capable identity. Finally, learning within the transformational and constructionist perspectives is not about meeting the expectations of expert others but about personal growth.

Such assessment demands challenge much common practice and are difficult to implement (Badcock et al., 2010). There are doubts about whether some generic capabilities can be assessed (Adriaensen et al., 2019). Workers point to institutions', accrediting bodies', teachers' and students' established systems and intolerance of risk and innovation (Coates, 2016) and the need to carefully define what it is teachers seek to measure (Shavelson et al., 2018). Other workers, however, emphasise the assessment imperative, noting that students may not be motivated to learn unless generic competencies form part of their assessment regime (Chan & Yeung, 2019).

A shift in pedagogical mindset

In summary, the text above suggests a particular shift in mindset if teachers are to move from teaching conceptual knowledge to traditional-age students to developing generic capabilities and catering for more diverse mature learners. For some teachers, this shift might seem radical, and for others, a minority, it is what they already do.



Figure 1: From curriculum alignment to alignment in capability development

The framework described above was developed as part of a national project which included delivering an academic development programme. Recognizing that academics are themselves mature learners and that the project team wished to develop generic attitudes and practices rather than convey specific knowledge and skills, the framework was used to inform the design of the professional development initiative.

Using an educational design approach (Easterday et al., 2016), a national programme of workshops was designed and delivered. Each workshop began with an exercise that enthused, built confidence and conveyed the utility of our session. Attendees were prepared for learning through exercises by bringing existing knowledge to bear on current challenges. Foundational concepts were 'discovered' by attendees through carefully designed exercises. An infographic was shared so the attendees had a common vocabulary and did not rely too much on their memories when they collaborated on difficult tasks. Concepts were applied in groups and individually and necessary shifts in mindsets were discussed, challenged and explored. Collectively, the potential applications of the framework in multiple contexts were worked through and critiqued. Each session culminated in participants having demonstrated to themselves and others that they could use the framework to address an issue pertinent to their teaching. Further information and the workshop run-sheets and materials are available on www.futurereadygrads.ac.nz.

Evaluations and debriefs were used to continuously refine the sessions and monitor the efficacy of the framework. The workshops were rated as relevant to participants' current teaching (96%) and participants confirmed that they were leaving the workshops motivated to try out new techniques (98%) and

would recommend the workshops to others (96%). The evaluation data, being at ceiling, although very reassuring, were not particularly useful in informing refinement. However, the reflections of the delivery team and observers were valuable and helped in adjusting content, refining timing and simplifying the workshop structure. Analyses of participants' self-reviews and plans suggested the model was understood. It was also evident that there was a wide disparity in the detail and sophistication of self-reviews and plans amongst attendees. The project has successfully developed a low floor, high ceiling design, that is, diverse participants, irrespective of level of expertise, could access the concepts, use the materials and apply them to their practice. Participants reported that workshops were useful for academics who were already developing generic capabilities and had a good understanding of pedagogy (88%) and accessible for those with little expertise (92%). On a note of caution, the positive outcomes of the workshops have to be viewed in the light of the recruitment method. All participants were volunteers and presumably interested in developing future-ready generic capabilities and open to changing their practices.

Discussion

This chapter serves to outline two important trends that impact on what and who HE institutions seek to teach. It draws on diverse theoretical perspectives to identify shifts in teaching practice that are necessitated by these trends and which are of established efficacy. Finally, the chapter briefly describes an effort to support teachers wishing to respond to these changes.

In conducting the research, the complexity and relative inaccessibility of the literature was apparent. It would seem unrealistic to expect most scholars from disciplines other than education or psychology to recognise, access and synthesise the works of researchers who publish in a diverse range of

journals, originate from differing disciplines, employ different units of analysis and adopt a range of philosophical and methodological approaches. Such an effort would take the time academics need for teaching and research within their specialist domains. There is a need for accessible and theoretically informed guidance, which brings the trends in educational demands into practitioner focus and suggests how to adapt teaching in response. However, the availability of guidance is not enough. As the consideration of learning transfer above makes clear, simply accessing informed guidance and learning about teaching by no means ensures that practices will be or can be changed. Teachers need to learn in particular ways, have time, access support and engage in repeated practice before successfully flexing their teaching.

In shifting to develop generic capabilities, universities are equipping students for futures in an environment where many of the jobs of today will have been supplanted by new forms of work, one's governments and employers may be currently unaware of. Thus, graduates need a range of advanced capabilities in order to discover, cope and flexibly contribute to society and the world of work in ways that cannot as yet be specified. Such an outlook raises multiple questions. While the theme of this chapter has been how generic capabilities can be taught, there are additional implications for university teachers. The increasingly short shelf-life of knowledge may have implications for teachers' identity which is predicated its privileged possession and the ways in which it can be extended through research. They may feel that this trend undermines or threatens their place in society. The threat may extend to students and teachers questioning the value of university education. What have universities to offer if it is not their knowledge and research? This author would take issue with such a position, arguing that the kind of thinking and behaviours graduates need cannot be delivered by anyone other than HE institutions. A shift to developing generic capabilities is not a rejection of

specialist knowledge or a shift towards vocational education or even to a form of professional education, it is an endeavour to develop minds that are prepared and equipped for whatever the future brings, be they pandemics, technological developments or extreme societal and environmental challenges. Such an effort though difficult, is surely an honourable one that can be embraced by higher education. What is required now is for teachers and universities to embrace this trend, bring research talent to bear and provision delivery.

In responding to changes in the student body and to better serving older, and more experienced learners, the chapter highlighted the need for educational relevance and practical application. This might be challenging for academics who have devoted their lives to research within the confines of a university. In preparing students for their immediate futures in employment, some institutions have established teaching/practitioner roles where teachers engage in industry and education. Such a practice is not new and has been used successfully for decades in medical education amongst other disciplines. However, although teachers with industry experience may know what to teach for today, they may not appreciate what to teach for tomorrow. Additionally, they may know less about how to teach than experienced academics. An alternative to bringing industry experts into the classroom might be to send students out into the place of work. Again, learning during internships and work placements may not be relevant tomorrow even if it is useful in the short term. Additionally, our many mature students and even younger individuals may be extremely familiar with the world of work, having held down full time or part-time jobs. Perhaps if governments want to anticipate future needs, then the universities and the intellectual talent within may be the most promising place to garner informed insights.

If universities are the place where advanced and future focused generic intellectual, attitudinal and behavioural capabilities are best developed then what research and strategic shifts would inform such a response? As is clear from this chapter, research is needed into how to teach and assess generic capabilities at university level. Current work is scant and reviewers note the piecemeal nature of the literature and the variability in research standards. Surprisingly, at present HEIs do not know exactly what generic capabilities students have when they enrol, what they have when they leave as many are unassessed, how students gain whatever they gain and how well these developed generic capabilities serve them in their futures (Evans et al, 2018). The lack of research may well reflect a lack of problematization and so a lack of prioritization at university level. Such a lack is likely to result in limited strategic and practical interventions and professional development offered to teachers that is overlooks trends and nuances relating to what and who is being taught and how any learning is to be utilised.

Conclusions

This chapter began by outlining trends in what and who universities aspire to teach. The need to develop generic capabilities in an increasingly diverse and mature student body was described. Reviewing established teaching practices and pedagogical knowledge, the chapter exposed current thinking and introduced perspectives from the allied fields of experiential learning, transformational learning, transfer of learning and andragogy. Drawing on these varied perspectives it was suggested that teaching practices and pedagogical mindsets could be attuned to emerging trends. The chapter identified a need for an enhanced focus on motivating students and explicitly preparing them for learning. The need for carefully designed opportunities for varied practice, reflection and challenge were identified as leading to the development of generic capabilities. Such opportunities, it was argued,

should be crafted to expose students to the kind of uncertainties and need for knowledge creation that our rapidly evolving environment is likely to demand.

In accepting a role in preparing students for their futures universities are undertaking not only to teach students the capabilities they need but also to do so that students maintain or grow these capabilities and deploy them appropriately in their future and widely disparate lives. The framework developed and disseminated is designed to support teachers as they shift their mindsets from disciplinary knowledge and traditional-age students to generic capabilities development in a more mature and diverse student body. It encourages teachers to deliver aligned curricula that: enthuse learners, enable them to prepare by exploring their learning journey and then to expand and exhibit their capabilities.

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CHAPTER 4:

Culture trumps structure in the competitive struggle between teaching and research

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Abstract

In response to international research-informed calls for the professionalisation of teaching to support student success, the South African Higher Education sector has implemented structures aimed at promoting teaching and research as equals. Despite this occurring at both the institutional and national level, many South African institutions are still struggling to achieve this balance, with research remaining a dominant factor in academic recognition. Using a phenomenographic research design and employing the notion of structure, culture and agency to conduct a thematic analysis of qualitative data, this study examines the success of a potentially enabling structure (i.e., a Postgraduate Diploma in Education [Higher Education]) designed to professionalise teaching in support of student success. The findings suggest that, despite strong indications that good

teaching is encouraged and valued, the dominant research culture within the authors' institution has negated the attempts to place research and teaching on an equal footing. Institutional-level structures remain fragmented with respect to research and teaching. Student success is not only dependent on receiving research-informed disciplinary knowledge, but also on how an institution promotes and facilitates well-informed and scholarly teaching practices. The authors conclude by recommending i) the recognition of postgraduate diplomas as an indicator of learning and teaching expertise by staffing and promotions committees; ii) the utilisation of agents who have self-selected to professionally develop their teaching to be part of a coherent system that supports and steers cultural change within academia; and iii) the recognition of research in learning and teaching as equal to discipline-specific research.

Keywords: South Africa, higher education, structure, culture, academic development, teaching and learning, research

Introduction

In the South African (SA) higher education (HE) sector, academics are generally required to contribute to three broad areas of work: teaching, research, and academic citizenship or service (Rothmann & Barkhuizen, 2008, p. 451). Research acumen is initially developed through the attainment of higher degrees, and later by conducting research studies and supervising postgraduate students. Academic citizenship covers broad areas of service within the higher education sector into which academics are inducted in various ways. However, teaching, and the teaching dimension of academic professional learning and development, continues to be less valued than research, which appears to be structurally and culturally prioritised (DHET, 2020, p. 12; Leibowitz, Bozalek, van Schalkwyk, & Winberg, 2015, p. 325). A large five-phase study involving eight SA HE institutions conducted between 2011 and 2016 found that at all eight institutions there was a “valuing of research over and above teaching” (Leibowitz, Bozalek, Garraway, Herman, Jawitz, Muhuro, & Winberg, 2017, p. 15). Leibowitz et al. (2017) also found

that the skewed focus on research is further complicated by the twin pressures on academics to do research and attain higher degrees in their disciplines (p. 15). A long-standing assumption widely held within the SA HE Sector (among non-educationalists) is that a doctorate⁶ or Master's degree in any given discipline automatically qualifies someone to teach at university level. However, those qualified in education know this to be a misguided assumption with negative implications for the sector and success of students, as quality teaching and student success cannot be separated (Mangum, 2017, p. 17). The Leibowitz et al. (2017) study, and an expansive body of research on academic development within the SA HE context spanning nearly three decades, substantiates this (McKenna, 2003; Volbrecht, 2003; Akoojee & Nkomo, 2007; Scott, 2009; Boughey, 2012; Boughey, 2013; Vorster & Quinn, 2017; Collett, Van den Berg, Verster, & Bozalek, 2018).

With the Department of Higher Education and Training (DHET) and HE institutions' increased focus on promoting student success (Leibowitz et al., 2017, p. 12), it is important to prioritise the professionalisation of teaching in HE. Transformative pedagogies that address the needs of SA students, as well as academic faculty that are well versed in educational theory, will most likely emerge from a culture that values teaching. This chapter aims to demonstrate how the tensions between teaching and research (Leibowitz et al., 2015, p. 325) remain evident at one research-intensive public university in SA, despite near-decade long national and institutional efforts to resolve them. Leaving these tensions unresolved could impede student success.

⁶ PhD is used where respondent feedback is quoted verbatim.

The authors expand on the Leibowitz et al. (2017) study by investigating the interconnection of structures and culture at the abovementioned university, where they work⁷. In particular, they explore culture's dominance over structure through an analysis of questionnaire and focus group data gleaned from engagements with the alumni of a Postgraduate Diploma in Education (Higher Education) (PGDipE[HE]) offered at the institution, which is viewed as an enabling structure focused on upskilling and developing academics and university teachers.

A guiding question of this research therefore became whether the alumni of the PGDipE(HE) feel that their achieved expertise is recognised and valued by their institution, and if not, whether inferences can be made between the recognition or lack thereof of the alumni, and the dominant research culture at the institution. Leibowitz et al. (2017, p. 15) emphasise that

the domain of culture has been shown to be extremely significant in reproducing and transforming dominant ideas about teaching and learning in higher education. This domain is salient at all institutions, whether historically advantaged or disadvantaged.

The argument made in this chapter is not that university teachers without formal teaching qualifications are inferior (there are many excellent educators who are not formally qualified), or even that all university teachers should attain a formal education qualification such as the PGDipE(HE). Rather, it is argued that, despite structural reform through national and institutional frameworks to enhance academics as university teachers, and

⁷ The institution did not form part of the Leibowitz et al. (2017) study.

with over 100 alumni having successfully completed the PGDipE(HE⁸), the dominant culture at this particular institution appears to remain skewed towards research. Boughey and McKenna (2021, p. 133) remind the reader that “structures require complementary cultures to be effective”.

Background and context

SA has come far in terms of structurally emphasising professional learning and development of tertiary academics. This has been achieved through national regulatory frameworks, with the introduction of the Council on Higher Education (CHE) and its Higher Education Quality Committee (HEQC). Quality assurance of learning and teaching is part of the HEQC’s mandate, as is the professional development of academic staff (Leibowitz et al., 2017, p. 21). The DHET’s latest initiative was the implementation of the University Capacity Development Programme (UCDP) in 2018, which focuses on developing the capacity of academics in their roles as teachers and researchers, while improving the quality of teaching and student success within the sector (DHET, 2020)⁹. This programme was born from the Staffing South Africa’s Universities Framework (SSAUF) implemented in 2015, which launches many staff development initiatives (DHET, 2020, pp. 18–19). The DHET (2020) acknowledges that “teaching activity enjoys lower status than

8 The authors are not arguing that the continuous professional learning (CPL) and development of academics as university teachers can only occur by means of formal qualification; however, the PGDipE(HE) (a formal, professional qualification) is the focus of this chapter, which is why this chapter does not address CPL workshops, short courses, and so on.

9 Prior to the UCDP, the DHET used to avail a Teaching Development Grant and Research Development Grant in three-year cycles. These were merged during the build-up to the 2018–2020 cycle and replaced by the University Capacity Development Grant (UCDG), which would realise the objectives of the UCDP.

research activity, and the recognition and reward that is afforded for research activity outweighs that afforded to teaching” (p. 12). One particular recommendation from the Leibowitz et al. (2017) study was that a national “policy on professional learning regarding the teaching role be written” (p. 15). In 2018, the DHET launched the National Framework for Enhancing Academics as University Teachers (DHET, 2018). This is the latest policy to promote the development of academics as university teachers in the nation’s continued effort to place equal value on teaching and research (DHET, 2020, p. 20; National Framework for Enhancing Academics as University Teachers, 2018, p. 4).

In response to the increased focus on nationally developing academics as teachers, the authors’ institution has prioritised the professional development of lecturers in several ways. For example, through its implementation of institutional policies, such as the Institutional Framework for Continuous Professional Learning (CPL) of Academics as University Teachers (2019), which all faculties at the institution need to espouse in their own interdisciplinary structures. This framework (a structure) enables the institution, and the sector at large, to make meaningful, policy-supported strides towards the upskilling of academics as university teachers, and was welcomed by many academic developers and learning and teaching professionals.

If culture is truly to shift towards a more centralised focus on teaching, the values contained in the Framework for Continuous Professional Learning of Academics as University Teachers (2019) need to be extended holistically to all of the institution’s policies. However, the emphasis on research remains subtly embedded in other institutional policy documents. In previous years, there used to be a “teaching track” for academic staff working at the authors’ institution, which allowed those appointed on this track to focus solely on

teaching. By association, this meant that research output was not stipulated as a requirement of service for academics appointed on this track, although some still conducted research from time to time. However, the teaching track was discontinued in 2014 for most disciplines, thus no longer allowing academic staff to focus predominantly on teaching. In contrast, the research-only track was not discontinued, thereby allowing academics to continue focusing predominantly on research if their contracts were approved in that way (Policy HRA17, 2014; Policy G-C-2020-023, 2020, p. 7). This means academics working at the institution are either appointed as traditional academics who have to contribute in the areas of teaching, research, and academic citizenship, or simply as researchers. This element of Institutional policy subtly perpetuates the cultural dominance of research over teaching.

Other examples of how the culture of research is enabled through policy can also be found. The Academic Workload Policy explicitly lists postgraduate supervision and research as important academic activities (Policy G-C-2020-023, 2020, p. 4) for developing the skills and capacity of a division, but it is silent on any teaching or teacher training. Developing skills within a discipline should include recognition for training in professional teaching if the institution wants to be clear on its commitment to the professional learning of academics as university teachers. The institution's Academic Promotion Policy can be seen to further complicate matters. While it speaks to four broad career tracks for academic staff, with the aforementioned teaching track still listed, it does not acknowledge that this track is not available to many if not most disciplines and faculties (Policy GJC-HRC-2021-040, 2021). Evidently, in as much as the authors' institution – and most SA higher education institutions – is following the international trend of promoting and supporting the development of academics as professional teachers at universities through formal structures (e.g., frameworks), there are still

subtle elements contained in institutional policy documents that reveal and support a research-dominant culture.

Another way in which the institution is focusing on the professional development of academics is through the introduction of its PGDipE(HE), which is a formal, professional teaching qualification aimed at developing academics as university teachers. Although the policy frameworks and PGDipE(HE) were not intentionally linked (the PGDipE(HE) was launched a few years prior to these frameworks being released), their objectives are aligned. This chapter focuses on the authors' observations of how the alumni experience the dominant research culture at the institution, using questionnaire and focus group data to draw inferences. In particular, both the questionnaire and focus group asked whether the alumni of the PGDipE(HE) feel that their achieved expertise has resulted in changes in their teaching practice and engagement, and whether they believe this is recognised and valued by their institution. The authors argue that even though their institution has implemented structures that recognise the importance of improving learning and teaching (i.e., the aforementioned framework and the establishing of learning and teaching centres in faculties), which should, in turn, improve student success (Mangum, 2017, p. 17), the dominant culture – perceived by the alumni – remains one of publish or perish (Callaghan, 2016; Von Solms & Von Solms, 2016).

Theoretical underpinnings and analytical framework

The lenses of structure, culture and agency (SCA) have been used extensively in educational research (Behari-Leak, 2017; Boughey & McKenna, 2021; Case, 2015; Leibowitz et al., 2017), both from an analytical and theoretical perspective. Informed by Social Realism (Archer, 1995, 2000, 2005) and

Critical Realism (Bhaskar, 1975), SCA affords educational researchers the opportunity to investigate the dual autonomy and interconnectedness of structure and culture, their interplay, the consequent outcome of that interplay, and the ways in which structure and culture either enable or constrain agency. In this chapter, the authors use the notions of culture and structure in particular to perform an analytical interrogation of qualitative data generated through a questionnaire and focus group discussions with PGDipE(HE) alumni of their institution, while briefly touching on agency (although a broader discussion of agency forms part of another paper). Case (2015) explains that structure “has to do with material goods (unequally distributed across society) and is also the domain of social positions and roles” (p. 843), while culture encompasses “the world of ideas and beliefs” (p. 843) including propositional beliefs, opinion, and myth (Case, 2015, p. 843). Lastly, Case (2015, p. 843) describes agency as the “domain of human action and interaction”, although, as Leibowitz et al. (2017, p. 5) explain, the notion of agency relates to “the power of individuals or groups to change their practices, conditions or contexts¹⁰”. Drawing on the SCA literature, one might say that the national structure of higher education in SA, and the institutional structure of the PGDipE(HE), have made some progress with positioning teaching as equal to research. Consequently, one would expect this national and institutional progress to filter down from faculty and school¹¹ levels to the academics themselves. Yet, what emerges is that

10 Although the authors will not be discussing Archer’s (1995) morphogenetic framework to investigate change or the lack thereof (as becomes apparent in this chapter), this will form part of their future work.

11 At the authors’ institution each faculty is made up of numerous schools, which in turn consists of various disciplinary/academic departments. For example, the Faculty of Commerce, Law, and Management has six schools, one of which is the School of Business

alumni are still perceiving a research-dominated culture in their everyday experiences of academia.

Methodology

The authors adopted a phenomenographic research design (Cibangu & Hepworth, 2016). Cibangu and Hepworth (2016) explain that the “focus of phenomenography is on people’s varying conceptions of a given phenomenon, not on the phenomenon itself” (p. 5). In the case of this study, the authors were concerned with the varying conceptions and experiences of PGDipE(HE) alumni in relation to their work as academics and university teachers after completing the qualification, not the qualification itself. Thus, the phenomenographic approach afforded the authors an opportunity to investigate the variation of alumni experiences (Marton, 2015 and Marton & Pong, 2005, as cited in Cibangu & Hepworth, 2016, p. 1) of the PGDipE(HE).

Following an online questionnaire (consisting of open-ended questions) with 19 PGDipE(HE) alumni respondents, an iterative and inductive approach was adopted, which identified recurring themes from the questionnaire data. These themes were used to inform the semi-structured focus group discussions held with eight of the 19 PGDipE(HE) participating alumni, who were grouped into three focus groups. One focus group met in person, while the other two met virtually. All focus group recordings were professionally transcribed. In line with ethical requirements (ethical clearance had been obtained from the institution’s Human Research Ethics Committee [Non-

Sciences. The school houses a number of departments, like the Information Systems Department, the Insurance and Risk Department, the Marketing Department, etc.

Medical]¹²), the transcriber was required to sign a non-disclosure and confidentiality agreement. Upon completion, the authors engaged in a collaborative, deductive analysis of the questionnaire and focus group data, using the lenses of SCA (Archer, 1995, 2000, 2005) to code their findings. The results of that analysis form the basis of this chapter.

The authors acknowledge that the sample size is small, with approximately 20% of all alumni responding to the questionnaire and a smaller group participating in the focus groups. Furthermore, although most questionnaire respondents indicated a willingness to participate in a focus group, the authors felt that the data gathered from the three focus groups was rich and detailed, and data saturation was reached by the end of the third focus group discussion. It is possible that the PGDipE(HE) graduates who did not respond to the questionnaire may have different conceptions of, and experiences with, the programme than those who did respond. However, the study focuses on the effects of enabling structures being constrained by a dominant opposing culture.

Findings and discussion

The PGDipE(HE) is a voluntary diploma for which academics may enrol, and it has been a formal structure at the institution since 2015. It consists of four part-time courses that are taken over a period of two years. These four courses focus on (i) learning and teaching philosophies; (ii) current debates around assessment; (iii) topical issues in curriculum design; and (iv) independent research, through which the staff member may explore any

12 The protocol number allocated for this project is: H21/06/02.

area of interest developed in the preceding three modules and write towards publication. This has been a well-accepted structure with over 100 graduates to date. The data comprised the responses of 19 participants representing each year of study since 2015. The participants' tertiary teaching experience ranged from three to 27 years upon starting the PGDipE(HE). Participants were from a wide variety of disciplines within the institution with a few being non-disciplinary-based academics¹³.

The findings centre on three emerging themes: Firstly, that the PGDipE(HE) alumni made informed enhancements to their own practice based on what they had learned from the PGDipE(HE), suggesting that the structure is a successful enabler. Academics report making more theoretically grounded decisions in their teaching practice and feeling better equipped to enter discussions via committee participation, contribution to policy writing, or Scholarship of Teaching and Learning (SOTL) engagement. Often, these changes seem to stop at the individual level, as few participants stated that they made or influenced faculty-level or institutional changes. Secondly, most participants experience a clear divide between discipline-specific research and learning and teaching research, with the latter perceived as being less valued than the former. Thirdly, some participants felt that the learning and teaching expertise they gained through completion of the PGDipE(HE) was not recognised or valued by their institution. The findings for each theme are presented and discussed here, followed by recommendations drawn from the discussions.

13 Some participants are not disciplinary academics directly involved in student teaching; instead, they work in academic development or learning and teaching centres. Therefore, their research is expected to involve SOTL.

Theme 1: The PGDipE(HE) as a successful enabling structure

Structures have been implemented to promote the professionalisation of learning and teaching in HE, such as National and Institutional Frameworks and the PGDipE(HE), but those structures are slow to effect cultural change in both teaching and research. Kezar and Eckel (2002, p. 436) posit that it may be beneficial to use cultural changes occurring at the micro-level to gain an understanding of the change process needed for real macro-level cultural change to occur; “[t]he challenge is to chart a middle ground and identify findings informative at a level that can be used to guide change processes... one solution to charting meaningful middle ground is through a cultural perspective” (Kezar & Eckel, 2002, p. 436). This chapter argues that harnessing the collective individual expertise and experience of the PGDipE(HE) alumni could be a useful starting point in making comprehensive cultural changes at a faculty and institutional level (Kezar & Eckel, 2002, p. 440; Williams et al., 2013, p. 54). This agency enabled by the PGDipE(HE) structure, if utilised and harnessed at the faculty and institutional level, can be a powerful means to connect the national and institutional structures with the type of institutional cultural change for which they are striving, thereby closing the middle cultural gap.

Influence of PGDipE(HE) on practice

Respondents were asked to “Please describe briefly what influence the PGDipE(HE) has had on your practices, if any”. The results suggest that the influence of the PGDipE(HE) on their individual academic practice has been profound for all 19 respondents, as they all reported making changes in their own teaching and assessment practices:

"I now think before I act, it has informed my academic decision making." [R3¹⁴]

"I now see teaching and learning as a process and not a destination. I constantly reflect and make changes to my teaching content, delivery and assessment." [R6]

"It has fostered innovative and flexible practices to my teaching and learning skills." [R8]

"It has drastically improved my learning & teaching and assessment practices. It has given me the ability to engage with how I construct curriculum in a more cohesive way." [R12]

These findings are indicative of the individual change that has already begun to occur as a consequence of the PGDipE(HE) for alumni.

Respondents also report a heightened awareness of students when implementing these changes:

"I am more responsive to learners' learning and how context influences learning." [R13]

"I think about what and how I teach, how students learn, what enhances learning, how I design curriculum and have reworked much of my courses, the activities and the whole programme" ...

"I am constantly experimenting to see where impact can be made for my students both on their enjoyment of the programme and their ability to achieve deep learning and criticality." [R4]

Student success is not only dependent on who the student is or what the student does, but also on how responsive the teacher is to the student's needs (Akoojee & Nkomo, 2007, p. 393; DHET, 2020, p. 12; Boughey & McKenna, 2021, p. 137). A crucial aspect of quality teaching is being aware of

14 R refers to respondents to the questionnaire and P refers to the participants in the focus groups.

the student and their needs and then adjusting pedagogical approaches accordingly. As Mangum (2017, p. 17) explains, “Quality instruction [is] a key element of [...] student success strategies”. The PGDipE(HE) brought such awareness to several participants.

The results also speak to more involvement, generally, in learning and teaching activities at the institution since undertaking the PGDipE(HE), suggesting that the programme has influenced the participants’ beliefs and practices. This is interpreted as a potential shift towards a culture, as defined by Case (2015, p. 843), or the strengthening of a pre-existing culture that values good teaching and views ongoing development of teaching expertise as vital to their role as academics.

Involvement in learning and teaching activities

Fourteen of the 19 respondents reported that their involvement in learning and teaching activities has changed since undertaking the PGDipE(HE):

“Yes, I tend to look out for opportunities that relate to teaching and learning; conferences, journals webinars.” [R3]

“I am alert to symposia, seminars, conferences and attend many of these. I still read in the field and speak to colleagues about how to better develop the critical thinking, the deep literacy and the enjoyment of learning all the time.” [R4]

“I now see the extent and importance of SOTL. Hence, after the PGDip, I enrolled for an M.Ed.” [R6]

“I now actively work on my own practice - it feels like constant action research. I attend many webinars on issues I find interesting.” [R18]

This change, while apparently widespread among the respondents and aligned with desired “continuous” professional development, appears to be confined to the individuals themselves and their specific practice. There is little mention of broader influence on colleagues. However, when

considering the potential benefits of their teaching development, the vast majority of the participants identify benefits to a broader constituency.

Moyo and McKenna (2021, p. 5) argue that “strong leadership that contributes to cultures of professionalism is needed for teaching and learning enhancement. Corporate agents – agents with significant institutional power – are key to the success of teaching development work.” While appropriate institutional structures and the right people at an institutional level are crucial to the implementation of any structure, this chapter suggests that harnessing the changes that individual agents are making in their everyday practice could be an equally beneficial avenue to explore in cultivating cultural change within the institution.

Perceived benefit to department and institution

Fifteen of the 19 respondents concluded that their individual learning and teaching development benefitted both their department and institution. These responses do not refer to actual measured benefits to learning and teaching, but rather to the respondents’ perception of the benefit to their department and institution:

“Yes, my teaching and assessment style has changed for the better. This in my view is a value add to both School and institution.” [R3]

“The real benefit is to my department and my students, the teaching assistants and the writing fellows.” [R4]

“I believe that the benefit to the School and [the Institution] is quite simply that I am competent educator. I am confident in my role and well equipped to take on new challenges.” [R9]

“It directly benefits my teaching, and my immediate division.” [R12]

“I am of benefit to my school because I contribute to the Teaching and Learning Committee.” [R13]

“I feel that I am contributing in meaningful ways at a faculty and institutional level.” [R19]

Despite the above claims, three of the 19 respondents qualified their completion of the PGDipE(HE) as beneficial to the Institution, with a reference to research output:

*“[The Institution] has benefited at both a practical level in the changes I have made to curricula and assessment practices as well as my ability to contribute to policy and **from my increased research output.**” [R2]*

*“The university might benefit from a positive reputation from students and those who encounter our graduates. **However, the university directly benefits from my SOTL publications subsidies and aggregate research outputs.**” [R6]*

*“[The Institution] will be gaining a more qualified staff, a more knowledgeable one, and **a more research-productive one.**” [R11]*

The authors attribute the statements above to the continued research-dominant culture at the institution, which arguably negates or diminishes the structures that recognise or promote teaching as equal to research.

Theme 2: Discipline-specific research versus learning and teaching research

Boughey and McKenna (2021, p. 133) state that there is a need for both learning and teaching research and discipline-specific research. However, they argue that learning and teaching research “cannot be pursued at the expense of an individual’s development in the home discipline” (p. 133), as research acumen in the home discipline is vital for academics to know what to teach their students (p. 133). This could be viewed as a subtle nod to a research-dominant culture within the SA HE sector more broadly. However, the authors of this chapter argue that, if the dominance of a research culture is to be challenged, individual interest and passion for SOTL should be

encouraged and nurtured. This would not only afford the individual an opportunity to become a scholarly expert in learning and teaching, but also enhance teaching practices and (by association) student learning and success (Mangum, 2017).

Closely linked to the above, a strong sense emerged from the focus group data that some participants felt conflicted by doing both home-discipline and learning and teaching research, as researching both (or favouring SOTL) created a researcher-identity divide:

“... we need a teaching capability framework. One that is linked to research outputs. One that is linked to sort of promotional, sort of opportunities beyond just research.” [P8]

“... you are often reminded to research in your area that you teach in, but never the question about do [you] research in how you teach.” [P5]

Participants also linked these sentiments to how a staffing and promotions (S&P) committee would perceive this tension. Discussions on staffing and promotions criteria revealed that research was often the primary indicator of an academic’s abilities:

“So, I often ask myself, where should I focus? Should I focus on business law, on HR or can I change and talk more about curriculum and teaching and assessment, because what happens next is when you’re being considered for associate Prof, there’s diversification or there’s diversity in your research. And that becomes a bit problematic. I wish, when it came to maybe promotions and the rest of it, that when the portfolio is displayed, you know, there’s an indication that you have an interest in the actual teaching and the about teaching. So, you know, I think, maybe there needs to be a little understanding that comes from faculty and those that review these portfolios, but I think there’s very little clarity as to what next for a PGDip [alumni].” [P5]

The above response from a focus group discussion illustrates the dilemma that was voiced by several participants: Confusion about negotiating the evident conflict between promotion criteria and processes (structures), and the attendant research-focused culture. This tension is further exacerbated by an inherent individual valuing of teaching, which has been developed and nurtured by enabling structures (i.e., the PGDipE(HE)), both at institutional and national levels.

The dilemma is further complicated by institutional demands for academics to achieve formal recognition as researchers through NRF ratings:

“... for NRF, if people are interested in applying for NRF ratings, they tend to, from what I understand, you know, they tend to want to see a specific focus within a discipline and so, if you’re doing research within the discipline as well as doing research about teaching in a discipline, they tend to see that as two separate focus areas rather than one. Which is a bit crazy.” [P4]

Again, this positions opposing cultures and structures against each other, within competing national structures; those focused on research versus those that support the professional development of teaching. While these should theoretically be able to co-exist, as both are required in the academic role, subtle criteria encapsulated in policy and supported by the prevailing research culture (such as a focused research portfolio), can be misinterpreted or abused.

There are examples of staffing and promotions criteria within the institution that arguably support the cultural dissonance between teaching and research. As mentioned in the Background and Context section, there is a research-only track in addition to an academic track. The former allows individuals to focus solely on research, while the latter requires duties across the areas of teaching, research and academic citizenship. Yet, the teaching-only track (which still exists in the Institutional Academic Promotion

Policy (Policy G-JC-HRC-2021-040, 2021)), is not an option for most within the Institution. Consequently, those wishing to focus on learning-and-teaching innovation and enhancement, must do so on the academic track and in addition to their research and academic citizenship responsibilities.

Under the confirmation and promotion requirements for teaching, the S&P Criteria (2019) refers to “good teaching” (p. 8) at lecturer level, “demonstrated teaching ability” and “solid contribution to teaching” (for promotion) (p. 6) at senior lecturer level, and “demonstrated ability to teach” (p. 3) at associate professor level, without any further elaboration on what this means. In practice, academics employed on the academic track (which is the norm – at least in the faculty where the authors work) who wish to apply for promotion are required to submit two or three student evaluations of teaching undertaken in the preceding years, which the criteria document implies will be used as an indicator of teaching competence. In other words, teaching competence is largely assessed according to student perception and feedback. Shifts are starting to occur towards more robust and well-rounded measures in addition to student evaluation (i.e., peer reviews, teaching philosophy statements, and portfolios of teaching), but the dominant cultural belief among academics is that student evaluations remain most important to the S&P committee. It is only at the level of professor that the criteria document first mentions a teaching portfolio (S&P Criteria, 2019, p. 1), with no mention anywhere in the criteria document of how a PGDipE(HE) might count towards recognition of teaching competence for the staff member who has successfully completed it. Thus, this is an example of two structures within the institution (i.e., the PGDipE(HE) and the S&P Criteria (2019)) not being aligned, possibly at the expense of learning and teaching.

In contrast, the research requirements across all levels of promotion, from associate lecturer to full professor, are well articulated, with a clear

indication of how many publications are required within a specified timeframe, and/or what further higher degree studies are necessary. Additionally, readers are assigned to investigate the quality of an applicant's research output. The message embedded in such strong emphasis on research, and so little on teaching, is testament to the way in which the misalignment of structures serves to support the dominance of a research culture within the institution, which (as the data shows) has tangibly affected the participants of this study. This echoes Boughey and McKenna's (2021, p. 13) quote presented earlier that "structures require complementary cultures to be effective".

Theme 3: Recognition of learning and teaching expertise

The professionalisation of teaching in HE has received much attention in SA HE literature (Behari-Leak, 2017; Leibowitz, 2017, p. 28; Boughey & McKenna, 2021, p. 140). However, when respondents were asked if they felt recognised as having expertise in learning and teaching by their colleagues, school, faculty, or the university at large, the minority – five out of 19 – indicated that they experienced some level of recognition in this regard:

"Yes, I have been invited to speak at seminars as well as contribute to T&L policy at all levels." [R2]

"Invite to join committees and mentorship." [R3]

"Not really. Although my Head of School has been supportive of me applying for grants or when I speak at symposia etc." [R4]

"This is hard for me to answer due to my position in a faculty T&L unit which means that invitations to join committees are often related to my position." [R10]

"Absolutely. I have been invited to join university committees and am seen as an expert in my faculty and school. I must admit that this may also be related to my PhD in education." [R14]

Conversely, 10 participants explicitly said they did not believe that their expertise was recognised:

"The School has not regarded it, acknowledged it or in any way drawn from this experience. Even during the pandemic I offered to sit on a committee thinking about T&L (not the formal T&L committee but a discussion/community of practice space within the school) but it fizzled out as overwhelm set in and no real focus / resources / champion took it on. Apart from the teaching faculty of the PGDipHE I don't think anyone else really cares about who has done the PGDip HE." [R4]

"No, I don't feel like my expertise are recognised anywhere at [the] University. I have accepted that the university is a corporation and it is only interested in research output. So, for me SOTL is for both my unrecognised critical and reflective teaching practice, but also for the recognised publication track." [R6]

"No, I don't feel like it has been recognised in the school more generally, except by one or two individuals." [R12]

During the focus group stage, the theme of whether the institution recognised and valued the alumni's expertise gained through the PGDipE(HE) was further explored, with one participant commenting that

"... there's generally a culture in the institution of a lack of celebration of what works well in teaching and learning. You know, you get the awards every now and again, but that touches very few [people]. There is very little ways of celebrating excellence and innovation in teaching in a general sense" ... "Teaching is not valued in the same way as we all know, as easily countable, bean countable research output" ... "you'll never convince me that this institution is serious about teaching and learning until they shame poor teachers in the same way that they shame inactive researchers." [P2]

Two participants felt that the message they received “coming down from the top” is to attend workshops offered by the institution’s Centre for Learning, Teaching, and Development, which have become a mere box-ticking exercise for promotion or probation:

“And I mean, it’s so strange how many people just see their teaching responsibility, or seem to see their teaching responsibility as just something, it’s just a box I need to tick, I have to do it, and I mean, we see that regularly.” [P2]

Other participants reiterated and expanded on what was gathered through the questionnaire responses:

“I don’t feel that there is any institutional and departmental recognition of having the PGDip. In my department we still believe in research. Classical [disciplinary] research as an indicator of, you know, your academic ability or stature. [The PGDip was a] Sort of something nice to have but not something that directly has an impact on my work or could have an impact, a positive impact on the departmental work. And as it were, one of our colleagues, I think two or three years ago, resigned because she was in the senior tutor track and really, her contention was that she doesn’t feel valued because now the department values people with PhDs and doing [disciplinary] research. So, as a departmental issue it’s, for them the PGDip is of no value at all.” [P6]

“I think part of the problem at [the Institution], like at many universities...is that the teaching function is not seen as a prioritised or incentivised as much as the research focus is. People get appointed pretty much as a lecturer based on how well you can prove yourself as a researcher. So, you know, oh, you’ve got a Master’s degree or you’ve got a PhD, okay, now come join the department and teach and research again.” [P4]

“... as time’s gone on and as time should progress, it should be much more recognised. That this is what we actually need to do as part of our profession. I mean, if you look at our promotion and confirmation things, as you know, like are you studying, are

you progressing [...] Are you actually doing a PGDip, are you growing yourself in your teaching and learning? Because I think that's unfortunately the part that gets neglected [...] You know, research and all that, how much you, how much are you researching. How much are you actually, what papers are you putting out, what journals are you going for? That gets acknowledged a lot more than what actually are you doing on teaching and learning. And for me that, teaching and learning should be a lot more acknowledged." [P9]

Throughout the questionnaire and the focus group discussions, participants mention that the institutional culture still predominantly values research over teaching. Therefore, the lack of recognition of teaching achievements within divisions is perhaps not surprising; as Behari-Leak (2017) emphasises, "[t]o what extent can individual academic teachers mediate problems located at structural and systemic levels through their own practice?" (p. 486).

The PGDipE(HE) is not unique as a structure where the participants and their work are all but invisible; the national UCDP-funded TAU programme¹⁵, which has fellows across all 26 public universities in SA working on projects designed to advance teaching, also grapples with the problem of supporting sustained improvement in teaching by empowering its fellows to undertake the role of change agents within their institutions (TAU, 2021).

¹⁵ TAU is the Teaching Advancement at Universities programme, a collaborative project initiated by HELTASA in 2016 and funded under the UCDP. TAU is a component of the DHET's National Framework for Advancing Academics as University Teachers.

Recommendations

Our findings strongly suggest that, despite well-established national and institutional structures to support and enable the development and professionalisation of teaching, the dominant culture (at least at the authors' institution) remains research-focused. The challenges experienced by participants of strong and well-established national structures like TAU suggest that similar claims might be true across the sector.

Despite enabling and supporting structures geared towards the development of academics as teachers in recognition of its importance and relevance to student success (Mangum, 2017), the research-dominant culture of the institution means that research continues to be valued and rewarded (whether subtly or explicitly) more than teaching – a case of culture dominating structures. The participants mentioned how their personal improvements could benefit the institution at large, but very few of them referred to actual change they were making at an institutional level, with research and publication remaining more celebrated in academia. Additionally, the participants report a divide in their research interests, with clear tensions between their disciplinary research and research focused on learning and teaching. Some participants even stated outright that their learning and teaching research is not valued within their disciplines, nor among their discipline-specific colleagues. This creates uncertainty for academics who want to pursue research in learning and teaching, which is acknowledged as an important contributor to quality teaching (Leibowitz et al., 2017; Boughey & McKenna, 2021). While the institution has come far in establishing the necessary structures to promote academic development in learning and teaching, the cultural undertone experienced by academic staff is that research output is still a dominant driving force within academia, and

disciplinary research generally remains the preferred form of research output.

With this chapter, the authors make three recommendations with the potential to foster cultural change within the HE sector, aimed at bridging the gap between the national and institutional structures implemented for the professionalisation of academics as university teachers and the individual experiences of PGDipE(HE) alumni.

Firstly, the authors recommend that staffing and promotions committees recognise the PGDipE(HE) and similar qualifications across the sector. There must be greater recognition of teaching achievements, teaching innovation, SOTL, and what constitutes quality teaching under staffing and promotions criteria.

Secondly, as emphasised by Kezar and Eckel (2002, p. 452), there is a need to make the changes occurring at HE institutions visible to the individuals within those institutions. Therefore, the authors recommend that PGDipE(HE) alumni and participants in national structures like TAU be recognised and utilised within their schools, faculties and institutions; thus affording them the opportunity to use their agency, knowledge and expertise to advance cultural change within the spaces they occupy. To this end, faculty deans and department heads should be informed of who these academics are and capitalise on their learning and teaching expertise. Allowing these graduates to serve on learning and teaching committees, encouraging them to run workshops on teaching innovations and new assessment strategies, and giving them the freedom to pursue their learning and teaching interests are some examples of how this may be achieved.

Thirdly, the authors recommend that the recognition of learning and teaching research be viewed as equal to discipline-specific research. While

the relevant institution's Framework for Continuous Professional Learning (Institutional CPL Framework, 2019) states that "at a research-intensive university, scholarly engagement with a body of evidence underlying effective educational practice is just as important as scholarly engagement with disciplinary knowledge" (p. 9), it is clear that this is not being operationalised in some disciplines. Anecdotal observation suggests that this is widespread across HE institutions in SA and may warrant further investigation.

Limitations and conclusion

In this chapter, the authors have only briefly touched on the matter of agency. A continuing area of exploration involves more in-depth research of the agential forces at play (e.g., PGDipE(HE) alumni and institutional leaders) in the tensions between the structures and culture explored in this chapter. Additionally, a more comprehensive analysis of change over time, using Archer's morphogenetic framework to guide the analysis, may yield new insights into the evident tensions between teaching and research cultures and structures within the HE Sector in SA.

In conclusion, as long as the structures intended to facilitate equality between teaching and research remain fragmented, the likelihood of these overcoming a long-established and powerful research culture seems slim. If institutions are to avoid negation of their efforts to facilitate this shift, it is recommended that a system of coherent and consistent enabling structures is established, both at institutional and national levels. In some cases, this requires simple actions, such as achieving coherence between policies and a potential shift from exclusively top-down efforts in order to promote recognition and support of change driven by individuals from the ground up. The fact that passionate academics could be prevented from contributing to

student success through scholarly engagement with learning and teaching practices due to a research-focused culture is a travesty.

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CHAPTER 5:

Responding to the call for transformation in higher education in South Africa: Beyond "decolonisation" to contextualisation of the curriculum

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Abstract

South African higher education has undergone numerous social, political and cultural changes in response to the call for transformation in the sector. The attention-grabbing student protests – popularly referred to as the #RhodesMustFall and #FeesMustFall campaigns – set a new tone and platform for reflection by leaders in the education sector, inclusive of higher- and basic education in South Africa. These have steered many conferences, seminars and research on “decolonisation” by national education departments, universities, colleges and organisations such as Universities South Africa (USAf). Some of these activities have ushered a shift in the understanding and use of the concept ‘transformation’ to mean ‘decolonisation’ of the curriculum. Giving this shift, we collected data using a systematic literature review to answer the following question: How can we respond to the call for transformation in HE beyond decolonisation of the curriculum in order to achieve fitness for and of the purpose of HE in South Africa? From the data collected, we argue that the approach of perceiving

decolonisation as synonymous to transformation is limiting in focus and scope and impacts less on transformational challenges in higher education. We argue that transformation in higher education should be considered in terms of the four main patterns determined by Du Preez, Simmonds and Verhoef (2016): transformation through curriculum, transformation through structures, transformation through redressing equity and transformation through access. In terms of the dimension of transformation through curriculum, it is suggested that an all-inclusive curriculum suited for globalisation should be considered. Such a curricular in HE is contextualised and would not only address the need to decolonise the higher education curriculum and provide cognitive justice to the previously disadvantaged, but will also address other higher education challenges such as graduate dropout and throughput, graduate employment and curriculum relevance to national and international economic growth which is standing on our way from achieving the purpose of and for Higher Education.

Keywords: transformation, decolonisation, contextualisation, inclusivity of the curriculum, higher education in South Africa

Introduction

The current pressure and centrality of HE transformation in South Africa on decolonisation of the curriculum arguably suggest that it is the solution to all HE dilemmas and our path to fitness of and for purpose in HE. The outcomes from a series of debates on the subject have birthed different approaches to decolonising the curriculum. Suggested approaches vary from changing the content to a complete deconstruction and reconstruction of the curriculum so as to change the purpose of the curriculum, change the notions of assessment, change the ways in which learning is weighted and measured etc. The advocating by students and activists almost portrays that, once the curriculum is decolonised, depending on what it means, all other curriculum-related challenges associated with design, development, implementation and management – such as technology integration, low throughput, access, cognitive justice, student performance, student retention and employable

graduates, etc – would disappear. We argue that the need to address these other curriculum related challenges are central to our achievement of fitness for and of purpose in HE and should be fundamental in our drive for HE transformation. We argue further that the complexities in the understanding of the word transformation or curriculum transformation and the prominence in the equation of the word to decolonisation of the curriculum despite the limitations in the meaning of decolonisation when compared to transformation is a concern.

The HE transformation agenda, just like the HE curriculum, is broad with diverse imperatives. The route via the current agenda of decolonisation of the curriculum to achieve HE transformation is one approach – a small piece of the pie with necessary impact to the bigger picture. However, it is necessary to consider that the curriculum in HE, just like in any other level of education, is highly influenced by the social, physical, economic and cultural environment, both nationally and internationally. This implies that the context of these influencers affects what is incorporated in the curriculum design and development and subsequently determines how the curriculum should be implemented for it to be relevant. This suggests the need for curriculum contextualisation – a concept beyond curriculum content for those who own it. Therefore, a rethink on content verification and pedagogic methodologies as some scholars see decolonisation of the curriculum to mean is simply not enough for HE transformation. We explore what the concept of curriculum contextualisation means for the creators and consumers of the HE curriculum in a later section.

Background of the chapter

Globally, there are growing concerns over transformation in higher education (HE) (Higher Education) (Mok, 2015), with different geographical areas being

influenced by different kinds of political, social and cultural forces. These concerns are evident in scholarly research and in the popular media about the “crisis in higher education” both locally and internationally. For example, Bagarukayo & Kalema (2015) say that HE is standing on a cliff, either waiting to disappear into the chasm of insignificance or needing to take off soaring to new heights in an ICT revolution, popularly referred to as the Fourth Industrial Revolution (4IR). In the African context, Ngubane & Makua (2021) believes there is limited appreciation and respect for ‘Africanness’ in the curricular of higher education in Africa. Blignaut and Koopman (2020) say the pedagogies in higher education are not culturally responsive and cognizant of social justice issues. Of greater concern, especially in South Africa, are the difficulties universities face to adapt their structures and functions and change their culture to reflect the changing realities and forces of society (Bagarukayo & Kalema, 2015).

Generally, it is a difficult task for all stakeholders in HE nationally and internationally to adapt their structures and change their culture as part of transformation. This is because some structures take long to change and some institutional cultures are shaped by many years of operation within certain structures. Moreover, bearing in mind the complexity of the social forces behind the call for HE transformation in South Africa, and particularly the decolonisation of the curriculum of universities, the call for HE transformation only gets more complex in South Africa. Considering that the “what” (what is to be included in the curriculum), “how” (how is it to be taught) and “who” (who is supposed to teach it and who is being taught) of the curriculum of universities are still a space of contention with strong influence from government, industry, organizations, the university community and society in general, it becomes challenging to direct and manage change irrespective of such pressures.

Given the situation, it is tempting for institutions to make decisions on the approach(es) to follow to transform South African HE based on the influence from a social group with more pressure. This seem to be the growing trend across HE institutions. However, it is important to consider the interests of all role players from different disciplinary, departmental, institutional, national and international contexts with strong influence in the HE curriculum. The approach of considering the interest of all stakeholders is contextual and aligns with Fourie (1999) view of transformation in HE. Fourie (1999) claim that transformation of higher education institutions does not only involve changes in the composition of staff and students, or changes in governance structures or course content. In essence, it is about the transformation of the organisational culture and the development and acceptance of new, shared values which can be achieved through the involvement of all stakeholders and role-players, of which academic staff requires particular attention (Fourie, 1999). As such, transformation of HE curriculum should be understood as a social practice which is concerned with the cultural and social conditions that underpin the construction of curriculum knowledge (Luckett 2010).

Problem statement

There are a lot of struggles that have influenced and are still influencing transformation in HE but are not new. The pressure to transform HE has, however, recently received heated attention through the #RhodesMustFall and #FeesMustFall campaigns in South Africa. Together, these struggles have warranted inquiries into transformational plans in the country by government departments and higher education institutions (HEIs).

In 1994, the then new South African democratic government committed itself to transform HE, addressing the inherited apartheid social and

economic structures that favoured a distinct group in the country. Therefore, post-apartheid South Africa has witnessed an array of transformation-oriented initiatives, all addressing what different role-players think South African HE should look like (Badat, 2010, Mamdani, 2011) after redress in political, sociological and educational spaces in the country (Soudien, 2015).

However, given its history, the process in South Africa has differed from the complexities and demands for transformation experienced in other countries. The South African government of 1994 inherited a fragmented and uncoordinated higher education system and equity, social justice and inclusivity became important reference points in the fight for a transformed education system (Badat, 2010). However, curriculum transformation is often loosely defined and that sometimes derail the HE transformation project. Different scholars offer varied viewpoints on what they understand curriculum transformation to mean or entail. Given the level of pressure from some stakeholders' groups, the conception that equate decoloniality to transformation is gradually gaining prominence. The HESA feels that this one-dimensional or narrow conceptions of the remit and nature of HE transformation can no longer be predominant in the South African context (HESA, 2015). As such, there is need to reconsider the understanding of HE transformation and the transformation of the curriculum in South Africa in order to refocus the HE transformation project. For this reason, the DHET directs the South African debate on HE transformation by considering "transformation" to refer to a comprehensive, deep-rooted and ongoing social process seeking to achieve a fundamental reconstitution and development of its universities and other HEIs to reflect and promote the vision of a democratic society through its curriculum project (DHET, 2013). In more specific settings of teaching and learning in HE, this vision is fused with transformational goals in the post-apartheid era to realise a more representative demographic profile of South African campuses with the

assumption that better democracy and relevance of all citizens are achieved (Luckett, 2010).

Even though the DHET curriculum project to ensure HE transformation has started with some notable achievements through funding and policies (Ebewo and Sirayi, 2018), so much must still be done in terms of the curriculum, access and cognitive justice so as to reach the democratic and human participation that is needed. This entails a simultaneous process of eradicating all forms of unfair discrimination and creating a HE Sector that gives full expression to the talents, values and traditions of all South Africans, particularly the marginalised and poor (HESA, 2015). One would expect that such needed transformation (as defined by the Department of Higher Education and Training (DHET, 2013) would have been realised by now, 26 years after the ending of apartheid rule and the establishment of a democratic South Africa. Unfortunately, this is not the case; not to say nothing has been done to dismantle the HE epistemologies of the apartheid era, nor do we disqualify the attempts made by institutions and curriculum mediators to decolonise the curriculum. We only argue that there is more to curriculum transformation that have been unconsciously overlooked.

We present some efforts by some of South Africa's top-rated universities – Stellenbosch University (SU), Rhodes University (RU), and the North-West University (NWU) – to show how they have attempted to respond to protesters' demands at an institutional level coupled with initiatives by other stakeholders (government departments). These protests were initiated mainly by black students; however, other races and even a few academics later joined the campaigns – from the streets of South Africa to seminars and conferences rooms. There has been a commendable effort by university management immediately after the heated student protests emerged.

Even though there are some indicators that transformation has been achieved – like having more black students – student access, dropout- and failure rates are still high and are still differentiated along lines of race among both undergraduate and postgraduate students (DHET, 2020) not to speak of the dominant demographic of senior academic staff being white (Vorster, 2016).

Another key issue raised by the student protests was black students questioning their alienation by institutional culture – making the university culture warmer and friendly to black students by respecting their historical struggles, values and cultures. They also quest for epistemological access. Moreover, in the teaching and learning space, the need was highlighted to start paying attention to and allowing for an inclusive choice pertaining to curriculum content and pedagogy. These protests were intended to remind the universities of these failures. Protesters believed that the curriculum they learnt and the methods that were forced upon them were not necessarily good for the black child to function appropriately in his or her immediate society and to participate in the global world.

As noted earlier, reacting to these protests in an attempt to address the concerns raised regarding the HE curriculum, most universities are currently undertaking steps to transform, bringing to light a HE curriculum that serves the interests of all South Africans. However, the influential groups dictating the approach so far have been stakeholders and interest groups with the thinking that the only way to transform the HE curriculum is to decolonise the curriculum. This is not surprising because of historical facets. Probably since the curriculum was used as a tool of exclusion during colonization, then the only way to right the wrong is to decolonise the curriculum. This creates the impression that decoloniality of the curriculum is the only transformative agenda relevant to the South African context. This is part of the national

context that institutional- and program or discipline contexts should respond to.

Oftentimes, the terms transformation and decolonisation are mistaken as meaning the same thing. This misconception consequently communicates an ideology that is becoming more popular – that curriculum transformation means decolonisation of the curriculum. Hence, the understanding of decolonizing the curriculum to mean replacing texts by white and European scholars with work by those who are neither (Mgqwashu, 2018) is curriculum transformation. This thinking is evoking strong emotions and responses that are affecting the general process of transformation in HE and the decolonisation of the curriculum. In Naledi Pandor's doctoral research on "contested meanings of transformation in HE South Africa," her findings revealed that researchers and policymakers hold multiple views due to contradicting goals of transformation in equity, development and globalization (Naledi, 2018). According to Soudien (2015:4), "Manuel Castells says of us, we South African, that when we mention the word transformation we stop thinking." We are not clear on the best way to follow and often we condemn ourselves to socio-cultural theories on knowledge struggles and curricular options (Soudien, 2015). This only confirms how complex and complicated the understanding of the word has become to South Africans. This level of uncertainty usually promotes an avenue for stakeholders to easily align with a popular ideology which at this time is the equation of the word to decolonisation of the curriculum.

We argue that the complexities in the understanding of the word transformation or curriculum transformation and the prominence in the equation of the word to decolonisation of the curriculum despite the limitations in the meaning of decolonisation when compared to transformation is a concern. As such, we suggest the need to rather consider

the contextualisation of the curriculum as a better approach to achieving the curriculum transformation domain of HE transformation. We must state clearly that we do not proffer a framework that can be used for the decolonisation agenda or transformation in HE. We are interested in shifting the minds of scholars, curriculum specialists and senior managers in South African universities to consider approaches to curriculum contextualisation in the drive for curriculum transformation as one of the four pillars of HE transformation of which the decolonial agenda is part. To achieve this, we first present a review of literature that confirms the position that most stakeholders consider HE curriculum transformation synonymous decolonisation of the curriculum and how we got to see that we need to contextualise the curriculum if we are to transform the HE Sector.

Aim of the chapter

The main aim of this chapter was to present alternative approach to responding to the call for transformation in HE in South Africa beyond the decolonisation of the curriculum.

In order to achieve this aim, the following objectives were achieved:

- Explain the concept transformation in HE and decolonisation of the curriculum and highlight the difference
- Explore the understanding and use of the concept curriculum contextualisation in higher education for the creators and consumers of the HE curriculum.
- Explore the consideration of the contextualisation of the curriculum as a better approach to achieving the curriculum transformation domain of HE transformation.

Research design and methodology

This chapter made use of literature review as a research method. This was used in this chapter as a systematic way of collecting and synthesising previous research (Tranfield, Denyer, & Smart, 2003) in order to create a firm foundation for advancing knowledge on the use of curriculum contextualisation to achieve transformation in HE in South Africa. We integrated findings and perspectives from many empirical findings to answer the research question and achieve the aim and objectives of the chapter. In this research, we collected data using a systematic literature review to answer the following question:

How can we respond to the call for transformation HE in South Africa beyond the decolonisation of the curriculum in order to achieve fitness for and of purpose in HE?

All evidence that answers the research question were included. We reviewed peer-reviewed journal articles and other secondary data obtained from published annual reports from higher learning institutions and policy documents. A literature search was conducted to create a database of articles that focused on Transformation in Higher Education in South Africa and the debates on decolonisation and contextualisation. The following keywords/key concepts were used during the literature search: Higher Education transformation, decolonisation of the Higher Education curricular, contextualisation of higher education curricular

Conceptual framework

The dominance of Eurocentric worldviews and the post-apartheid curriculum in South Africa

We pose the following question: Was South African higher education colonised?

There are different ways to answer this question, even though the obvious answer is yes. This question could be answered through conceptual approaches and languages of description that support the decolonisation debate. However, as Fataar (2018) explains, the answer perhaps warrants a deeper reflection on the terms on which knowledge is selected, how it is taught and the basis on which the curricular at universities are constituted. In other words, decolonisation should be viewed from multiple viewpoints using a deep approach to this phenomenon. From this standpoint, and logically in terms of the need for cognitive justice, we are convinced that HE knowledge was not contextualised for the indigenous settings and people of South Africa. Moreover, if one considers the colonial mentality instigated through the curriculum of HE – i.e. that civilization is measured by European terms – then this goes beyond just curriculum decontextualisation and also includes political control and dominance and epistemic violence.

Since there are schools and universities accused (particularly during the student protests in 2015) of presenting content that pays little or no attention to the inclusion of indigenous knowledge as part of the contextualised package, is it socially just and academically correct to say South Africa HE was and is still colonised? This greatly depends on one's perspective of or approach to decolonisation. Considering that the knowledge in South African universities favours the Western canon founded on a separation of Western knowledge from non-Western knowers suggests

that modern knowledge would help instantiate foreign subjects. This is not surprising when one considers that the original idea of the colonist elites was to establish European civilization in the colonies when they set up universities (Pietsch, 2013).

Furthermore, we refer to the work of Soudien (2015) titled “Of false-starts, blind spots, cul-de-sacs and legitimacy struggles: the curriculum debate in South African higher education.” He writes, “if it is priority of the university to open access to previously excluded groups what does this way of thinking say about the knowledges of the excluded?” (p. 8). Clearly, no consideration was given to their histories, worldviews, not to speak of ontological and epistemological affordances. How do we start to deal with the freedom of our knowledge to become assimilated into the paths of transformation? The answers to these questions are blurry and would require an embraced approach towards a solution.

It becomes quite obvious that the whole idea of setting up universities in South Africa was a colonial project to promote white supremacy. To ensure that the supremacy remains rooted, universities were intended to train white youths to further expand their colonial society (Zeleta, 2009) and in the case of HBU’s, to provide bureaucratic labour for the apartheid state. Current challenges plaguing South African society today, such as racism, segregation and epistemic violence, can all be traced back to the establishment of colonial universities in South Africa. Just like colonial rule included political control and dominance, colonial universities were no different. Universities were used to continue the colonial dominance by enforcing the idea and thinking that civilization is Western. Eurocentric worldviews were at the center of African universities, relegating African and other worldviews. This is evident in the curriculum of universities, which are unapologetically Eurocentric

(Zeleta, 2009). Universities have established themselves as local representatives of universal knowledge (Pietsch, 2013).

The “decolonisation of the curriculum” project

Under this section, we cover the popular understanding of the concept of decolonisation and some approaches followed already to develop a transformed curriculum for universities. We realised that there is a focus in many literatures on decolonisation as a definitive solution to HE transformation. However, currently, we ask ourselves if this is really enough.

Perceived decolonised curriculum agenda in South African higher education

The current pressure and centrality of HE transformation in South Africa on decolonisation of the curriculum arguably suggest that it is the solution to all HE dilemmas. The outcomes from a series of debates on the subject have birthed different approaches. Suggested approaches vary from changing the content to a complete deconstruction and reconstruction of the curriculum so as to change the purpose of the curriculum, change the notions of assessment, change the ways in which learning is weighted and measured etc. The advocating by students and activists almost portrays that, once the curriculum is decolonised, depending on what it means, all other curriculum-related challenges associated with design, development, implementation and management – such as technology integration, low throughput, access, cognitive justice, student performance, student retention and employable graduates, et cetera – would disappear.

The HE transformation agenda, just like the HE curriculum, is broad with diverse imperatives. The route via the current agenda of decolonisation of the curriculum is one approach – a small piece of the pie with necessary impact to the bigger picture. It is necessary to consider that the curriculum in HE, just like in any other level of education, is highly influenced by the social,

physical, economic and cultural environment, both nationally and internationally. This implies that the context of these influencers affects what is incorporated in the curriculum design and development and subsequently determines how the curriculum should be implemented for it to be relevant. This suggests the need for curriculum contextualisation – a concept beyond curriculum content for those who own it. Therefore, a rethink on content verification and pedagogic methodologies is simply not enough for transformation. We explore what the concept of curriculum contextualisation means for the creators and consumers of the HE curriculum in a later section.

Popular approaches to “decolonise the curriculum” in South Africa

The obvious reflection from the review of the different approaches suggested by scholars and other interest groups is that the approaches are guided by their perception which consistently breathes the rejection or deconstruction of Eurocentric worldviews into the South African HE curriculum. Some examples are seen in the various academic projects in cognate fields, such as natural sciences and engineering, social sciences and humanities, law, and medicine (cf. Soudien, 2015): for example, programs such as the global citizenship and social justice initiative at the University of Cape Town (UCT); the University of Western Cape (UWC) with the emergence of indigenous medicines centers; the NWU developed a decolonisation declaration that empowers faculties to use different approaches based on the nature of the discipline and also developed a multilingual project that saw the integration of Setswana and Sesotho as languages of instruction; and the University of Limpopo (UL) incorporated the use of Sepedi in the undergraduate curriculum (Soudien, 2015).

To some scholars, decolonisation of the curriculum is all about the change in nature and identity of a university and the dismantling of all structures that

support the continuity of colonial legacy (CHE, 2017). A similar view was shared by Higher Education South Africa (HESA) (2014) when it sounded the quest for relevance which encouraged universities to undertake change that entailed de-colonising, de-racialising, de-masculinising and de-gendering the institutions as well as the methodology, scholarship, teaching and learning, and pedagogy. Other schools of thought focus on what is taught, and this appears to be the dominant ideology of most activists. This group focuses on the need to Africanise or indigenise the syllabus (CHE, 2017). This suggests the replacement of texts by white or Eurocentric scholars with those who are not. This view can honestly be perceived as an attack on white academics by black academics and students in a mixed-racial country like South Africa, resurrecting the injustices of the past (Mgqwashu, 2018).

Etheridge (2018) and Kaya and Seleti (2013) argue that a decolonised curriculum must reject the utilization of dominant Western worldviews of knowing and knowledge production as the only way of knowing. In whatever form these views are expressed, it must be emphasised that they are in no way promoting that decolonisation of the curriculum entails the removal of white men or women from the curriculum as opinions may suggest (Heleta, 2016; Ruddock, 2018). It is widely understood by scholars in South Africa that proposing the chasing of anything European from the curriculum would suggest the solving of discernment by discerning, which is an indication that South Africans have not learnt anything from apartheid. As such, to level playing field for everyone, black or white, local or Western, Etheridge (2018) underscores that the idea is not to do away with things that worked well and are still working and replacing them with local; it is about excluding content that serves a colonial agenda and replacing such content with local content for national relevance. This communicates a sense of focus on the purpose. This means whatever is relevant to the purpose of HE or a program, irrespective of the worldview, stays.

Other schools of thought views decolonisation of the curriculum as bringing Africa fully to the center of knowledge in African universities (Mbembe, 2018). This perspective highlights the need to create opportunities for African content and knowledge, which have been relegated to the periphery, so that they have a legitimate space in the center (Ruddock, 2018). This suggests the expansion of African worldviews – making Africa’s lifeworlds the center of African universities (Ngugi, 1981). The shortfall may be the availability and applicability of African life-worlds to all disciplines or knowledge, considering the strong debate on the lack of documentation of Africa’s life-worlds in some disciplines.

Fataar (2018) feels that focusing on and considering only all the above-mentioned approaches – including the exemplary activities at a few universities to develop a decolonial approach – are mostly at the level of ideas, symbols and politics. He advocates for the debate to be escalated to focus on the terms of the knowledge and curriculum veracity of the decolonial approach. This implies that the discussion should focus on what counts as knowledge based on a decolonial approach. Deep reflection on most of the above-mentioned approaches highlights the need to look at the understanding of concept of curriculum in order to develop a shared understanding of how to decolonise and transform the HE Sector. A common place to start could be to first reposition the understanding of the concept of curriculum: it means more than just syllabus, content and methods, and it includes students, lecturers and more importantly, context. To understand curriculum, one should bring together the theory and social actions in a dialectical relationship (Grundy 1987). A plausible approach to decolonise the curriculum would consider all the components of a curriculum. It is with this understanding that we suggest the need to recontextualise the HE curriculum bearing in mind all the components of a curriculum and the purpose of HE. Such an approach foregrounds the ideological nature of the curriculum and

questions the interest and values embedded in educational institutions and their curricula. It also supports a transformative rather than an adaptive reform process.

Institutional rollout plans to decolonise the curriculum

As complex as the understanding of and approaches to the whole notion of decolonisation, so too is the rollout plan to practically implement the ideologies. We present some examples from top-rated South African universities (SU, NWU, and RU) on their plans.

According to Etheridge (2018), SU is getting decolonisation of the curriculum done by supplementing the knowledge, research and perspectives from Western countries with those from South Africa and Africa. Stellenbosch students would thus have prescribed learning material from local and regional sources for analysis, discussion and assessment purposes alongside international academic sources. The university claims that the output of South African researchers and the relevance of their work are important to the curriculum project. Therefore, they focus on looking at the big picture – local and international – rather than throwing out. This global approach includes considering content from the Middle East, Far East and South America (Etheridge, 2018). The idea is to afford students the opportunity to interrogate academic material from multiple sources, compare and substantiate their findings with analyses and/or empirical research.

After the student protests in 2015, NWU published its declaration on the decolonisation of university education in 2018. What is clear in this declaration is to not provide specific examples, guidelines, frameworks and rules for faculties/discipline to follow. The declaration explicitly declares that matters on the subject are to be contextualised and reach maturity at faculty level (NWU, 2018). As regards teaching and learning, curriculum transformation on social justice, -inclusion and andragogy and language

curriculum design access are key. This would apply to “its academic programmes, and its approaches to, and methods of teaching, learning and assessment in its lecture halls, laboratories and other teaching venues in a differentiated manner” (p. 3). It is expected that faculties would work according to this declaration to maturity with the power to determine curriculum changes. The respective academic faculties are to detail their plans within a five-year span these changes to programmes or disciplines. In view of this, considerations to change education at NWU are centered on shifting focus in Africa on how to select, develop and communicate knowledge.

At RU, the Equity and Institutional Office convened a conference – (Re)Making the South African University: Curriculum Development and the Problem of Place – in April 2015 and later, a series of curriculum conversations by the Centre for Higher Education Research, Teaching and Learning (CHERTL), which to date are still hosted at the university. At the conference, students' discontent arose with regard to what they were taught and how the teaching was conducted, reaching a conclusion that it was time to decolonise the university and curriculum (Vorster, 2016). The curriculum conversation was to showcase ideas on how to decolonise university education by inviting scholars who had already started making changes to their teaching practices. These practices have been published so that other academics can consume these initiatives.

So far, most universities have focused on changing content and methods, with little emphasis on context. Perhaps the focus is more on content and methods because context is always taken into consideration when developing the curriculum of programs. However, with increase drive to promote access to HE and employment equity, there has been a drastic change in the institutional context as regards staff and student profile. The

national and international contexts have also changed significantly. The political-, social- and economic scenario of South Africa has drastically changed since 1994. There is need to reflect on and align the curriculum of universities with the needs of this new political, social and economic dispensation in order to ensure effective curriculum responsiveness, curriculum relevance and graduate employability. Moreover, in our opinion, the response by most institutions to the call for decolonisation of the curriculum cannot be rushed. There is need for both collective and individual effort. Hence, as we collaboratively work toward shared frameworks to transform HE, there is need for individual liberation on the part of students, lecturers and other stakeholders (Fanon, 1961).

The idea of adding new content on African worldviews to the existing curriculum and reducing European views is challenged as the solution to decolonizing the curriculum in South African universities. This approach is envisaged to still promote the status quo (Garuba, 2015; Heleta, 2016). It is considered as keeping Eurocentric views and adding bits and pieces of African worldviews. Heleta (2016) condemn this approach and regards it as ticking the box under the pretense of reforming and transforming. Moreover, the approach of mixing the curriculum content is quite challenging, as it becomes complicated to agree on the volume of African worldviews to be added, since the focus has not been on the goal of education but the composition of the content. Moreover, this does not necessarily change the content per se, and it is unknown as to what the extent such changes are accepted.

It is also reasonable to reflect on whether the volume would be guided by the availability of the worldviews or otherwise. This argument is in no way challenging the existence of African worldviews, but we must also accept that the volume of available African worldviews is not the same across disciplines, and there are some disciplines that have nothing or have not yet proclaimed

those who own the views. This may be ascribed to the prolonged dominance of Eurocentric ideologies over African worldviews in some disciplines. Due to the complexities involved in this approach, Heleta (2016) advocated for what Garuba (2015) described as the rethinking of how the object of the study in South African universities is formed, then reconstructing it and generating the required decolonised curriculum. Complete consciousness during this process is important (Casaire, 2000).

Findings and discussion

Contextualising the curriculum for relevance

The argument presented here does not condemn decolonisation of the curriculum in South Africa and should in no way be seen in that light; the concern is the approach of understanding and using the concept of decolonisation of the curriculum as synonymous to transformation in HE. We are of the view that that approach only partly addresses the problems in South African HE that motivated the transformation agenda. We feel the approach is being rushed for political expediency and that they are too narrow in focus. Effort and resources should be strategically invested in it. Moreover, because of the political association of the decolonisation philosophy in South Africa and the link of the philosophy to the emotional past of South Africa under apartheid, the essence of decolonizing the curriculum in the HE transformation agenda can be derailed. We should look beyond decolonisation of the curriculum in the transformation agenda. As a nation and the HE community, we should aim for approaches that can realise the decolonised curriculum while simultaneously addressing other HE challenges such as responsiveness, cognitive justice, curriculum relevance, graduate employability, low throughput, access, ICT integration, diversity across all levels of the curriculum, etc which needs to be addressed in order

to achieve the purpose for HE in South Africa and for us to have a transformed HE. We suggest the application of a contextualised and inclusive curriculum as a key instrument in the transformation of HE and not just a decolonised curriculum.

It is plausible to think that the enterprise to incorporate South African and African worldviews into the curriculum of HE in South Africa suggests the application of contextualisation of the curriculum as an aspect of decolonisation. However, decolonisation should rather be seen as an aspect of contextualisation and not the other way around. A decolonised curriculum is one of the end-products of a contextualised curriculum. A decolonised curriculum considers context as an aspect of decolonisation and focuses on the context in terms of African worldview (African content) integration or knowledge ownership, whereas the curriculum is more than just content and that should inform the needed transformation in HE.

Jacobs, Vakalisa and Gawe (2016) suggest five important components of a curriculum: outcomes/objectives, context, content, methods, and assessment. However, the significance of context is that it informs all the other components. There are several contextual filters (Stark, 2000) which, if carefully considered (in the design and redesign and development of the South African HE curriculum, considering contextualisation), would impact beyond just changing content. Changing content is seen as adding African worldviews, reducing, or completely deleting Eurocentric views, or mixing both in an undecided proportion. Contextual filters referred to here are student characteristics or diversities, student goals, external influences, program goals, university goals, pragmatic factors, pedagogical literature, professional support on curriculum stages, facilities, and opportunities (Oneill, 2015). Contextual factors fit into four levels (i.e. international, national, institutional and program or discipline). It is, however, challenging

to understand the influence of these contextual factors across these levels because they are ever-changing and are unique to a program, time, place and the persons involved. It is interesting to know that they can guarantee curriculum ownership and produce graduates who can contribute to the development of South Africa and integrate South Africa into the global context. By implication, the development of a curriculum with local, national and international significance and ownership is needed.

Towards an inclusive and contextualised curriculum in higher education in South Africa

The South African HE sectors and universities today comprise and attract multiple cultures as a result of the continuous socio-economic and cultural changes in the globalised world. It is logical to expect that South African universities would need to train individuals with cognitive and social skills to prepare them to face the reality of everyday life (Bagarukayo & Kalema, 2015; World Economic Forum [WEF], 2017). However, this is hardly the case in the HE Sector. In South Africa, the HE curriculum can be regarded as having a normative and prescriptive perspective without an agenda to cover the different interests of the students participating in the process and immediate communities (Botha, 2009). Perhaps this is why most activists for decolonisation of the curriculum constantly reproach the HE curriculum as foreign or westernised. Of even greater concern is the fact that the curriculum is considered as focusing on the accumulation and reproduction of knowledge from the perspective of a uniform curriculum prescribed by the apartheid regime (Masemula, 2013). By implication, the curriculum is designed to teach students what to think and not how to think. Nevertheless, it would be good to have an educational paradigm shift in the direction capable of providing students with the abilities and competencies to serve the South African society and Africa in general.

The concept of contextualisation may be a means to produce better students for the economy of South Africa and their immediate communities in such a way that the curriculum in terms of content, design and delivery, and assessment is rebranded.

Shifting towards inclusive curriculum development

Our view on the shift toward an inclusive curriculum is guided by the following quote:

“... Don’t want to stand out as different yet want to be recognised as individuals.” (Hockings, 2010)

From this quote, we deduce that, in order to contextualise the curriculum as part of the HE transformation project, there is need to recognise the diversity of students, staff and difference in the institutional and provincial contexts in South Africa. This does not suggest that we label students, staff and people from other universities in the different provinces of South Africa as different in terms of skin colour, race, culture, status, performance and institutional rankings; we must recognise their individuality and what makes them unique contextually when we design and develop the curriculum of programs at universities, hence our approach of an inclusive curriculum as key to the HE transformation agenda in South Africa.

The renewed focus on inclusion and equity in HE in South Africa is paramount and is known to potentially improve retention and graduation rates and the overall quality of education (Blessinger, Sengupta & Makhunya, 2019). Despite this, little literature is available on how to design the HE curriculum to be inclusive (Morgan & Houghton, 2011). Before zooming deep into the curriculum design of an inclusive curriculum, it is important to note that there are two important issues that inform the creation of the culture of inclusion in HE. They include the need to humanise HE and improve social justice, which is currently contestably invincible in HE in SA.

As reported by scholars, the current HE curriculum has failed to give recognition to the diversity of all students (Oneill, 2015). The current HE curriculum is in reality characterised by exclusivity and includes racism, sexism, elitism, supremacism, hegemony, bigotry, and so forth. Such exclusivity is reflected in all the curriculum components and shape the structure, culture and agency of universities. To turn this around, the focus on decolonizing the curriculum – which is understood to be content and pedagogical change – is not enough. To make the curriculum more inclusive and reflective of humanistic values, there is a need to integrate multiculturalism and the human rights of freedom of expression and participation in the curriculum of universities.

As learning is a social process, it is important to integrate social interactions and social norms into the design of the HE curriculum. There is need to ensure that the structure, culture and agency of universities create a sense of belonging and wellbeing. Considering the diversity of students and staff at South African universities, it is only logical that learning activities foster collaboration and embrace group and individual identities. Blessinger, Sengupta and Mandla (2019), emphasizing a holistic approach to developing an inclusive curriculum in HE, suggest that universities must be ready to accept the reality of full participation, including students, teaching and support staff, management, industries, local rulers, and indigenous people in society.

Curriculum for internationalisation and globalisation amid transformation

As stated earlier, O'Neil (2015) lists four important levels (international, national, institutional and program or discipline) that should inform considerations to contextualise the curriculum. At the international level, the

heart of contextualising the curriculum is to promote internationalisation through ensuring the international relevance of the curriculum. The need for internationalisation of teaching and research serve as a critical objective to drive transformation in HE across the world (Kishun, 2007). Internationalisation raises the quality standards and global relevance of tertiary institutions. It also attracts the best students and staff, creating revenue, pushing the boundaries of knowledge through research, and promoting internal diversity (Kishun, 2007).

As regards the internationalisation of HE, South Africa recorded an exceptional rating when they became the only African country, alongside the United States, United Kingdom, Australia, France, Germany, Japan, Russia, and Canada, where inbound mobile students exceed outbound mobile students (United Nations Educational, Scientific and Cultural Organisation [UNESCO], 2009). This might change for the worse if universities succeed with the current light which decolonisation of the curriculum is seen.

It cannot be overemphasised that the governments of countries worldwide see education as a major contributor to national wealth and economic development. However, one cannot undermine the challenge of keeping up with the needed continuous improvement of the quality assurance standard and the increasingly competitive external environment. It has become imperative for most tertiary institutions to maintain global relevance through the internationalisation of teaching, learning and research (Jibeen & Khan, 2015). The chances of realizing this objective in South African HE in the wake of dominant approaches to decolonizing the curriculum may affect university ratings and international relevance.

With the understanding that transformation in HE is imminent, the concern and focus should be on how to transform the HE Sector to become the most significant emerging market for international students with a well-

established relationship between gross domestic product (GDP) growth and tertiary education enrolment.

It is plausible to envisage HE in South Africa and Africa at the center of the education system and research. This suggests HE research that focuses on an Africanised system of teaching and learning and African social dynamics to be undertaken and reported based on an African worldview (CHE, 2018). However, it must also be recognised that a country's research base is a key factor that increasingly determines its international relevance (Jibeen & Khan, 2015). There is no doubt that researching about ourselves to improve ourselves as Africans (Ngugi, 1981) would become popular and attract collaboration in no time, which is a step in the right direction. But equally important in the contextualisation of the curriculum at the international level is to ensure that the research about Africa (and South Africa in context) to improve Africa (and South Africa in particular) also contributes to providing solutions to global challenges and benefits more than just South Africa or Africa. This is what makes it globally relevant.

Moreover, considering that the international context is everchanging, the notion of preparing students for a more complex changing world should be at the forefront of curriculum design and development (O'Neill, 2015). In addition, HE curriculum should be designed taking into consideration the need of a diverse student population in order to attract international students and students from diverse backgrounds.

Considering that one of the main purposes of HE is to link education with the world of work (Thomas, 2005) and to meet the need of society, it is important that the HE curriculum prepares graduates for employability and addresses the skills need of the country. However, it is quite challenging to plan for employment in the curriculum, as the job market, both nationally and internationally, is volatile. Therefore, to ensure the development of a

relevant and contextually responsive curriculum across all levels, institutional leaders should intensify the development of an interdisciplinary curriculum. One way of doing this is through the development of joint degrees. This can be done internationally across different institutions, nationally across universities in South Africa, institutionally across institutions, and even at a program level across different disciplines. This would contribute to an increase in graduate employability and would address the impact of the national and international economic environment on the HE curriculum.

At the national level, a contextualised HE curriculum promotes the development of programs that recognise institutional differences beyond the simple classification of universities in South Africa to include staff, students and resource differences. We emphasise the need to develop policies that promote institutional criteria for the development and accreditation of programs that recognise the individuality of the institution, the geographical location of the institution and the staff and student profiles of the institutions. In addition, quality assurance policies should also be developed based on institutional differences. As regards the growing use of technology, student and staff learning experience, the cultures, languages and the history of certain groups or races have been underrepresented in HE. For example, students from lower socio-economic groups are underrepresented in HE. However, institutions are developing a number of initiatives to promote access and provide support to groups in transit to and within HE. However, more needs to be done to provide cognitive justice to this group.

Institutionally, every HE institution in South Africa has its own social and historical context which has shaped the culture of the institution. The social and historical context also greatly influences how the curriculum is designed, developed and implemented locally. Institutions should develop policies taking into consideration their institutional contexts when responding to

national drivers and context. They should also look at curriculum projects that can influence the design and development of programs in different faculties. Resources at different faculties and schools within particular institutions differ. The nature, experience and number of teaching staff also differ and influence the curriculum of the faculties and institution. It is suggested that these influencers be consciously considered; these differences at various institutions cannot be ignored.

As regards discipline, a contextualised HE curriculum recognises that HE programs are situated in disciplines and cognate disciplines (O'Neill & McNamara, 2015). As much as it is important to consider the discipline in the design and development of curriculum programs, there is also need to consider different worldviews of knowledge in different disciplines, paying attention to the knowledge owner, how it is taught and by whom and in the process be guided by the goal of the discipline and that of the institution and HE for national and international relevance. Moreover, there is need to maintain strong yet permeable disciplinary boundaries in HE (Neuman, 2001). This would promote career migration and employability.

Lastly, a contextualised HE curriculum also emphasises the consideration of a pedagogical context in which universities and stakeholders have to pay attention to the need to educate students not only in disciplines but also in terms of the skills associated with collaborative-, cooperative- and self-directed learning. This may lead to the manifestation of graduate attributes or critical cross-field outcomes. The old idea of a traditional university involved content being memorised by and transferred to students; a pedagogical shift was needed. Lecturers are now expected to play a facilitating role in the teaching and learning process so that they guide and support students toward self-directedness, actualization and autonomy to become responsible and intellectual citizens. This is echoed in an African

philosophy, episteme of intellectual reflection, called “onuma.” This means that students should reach a stage where they can be regarded as well-rounded, broadly orientated intellectuals with the capacity to embark on a lifelong, values-oriented path of interaction with knowledge and views about reality and their application to various contexts (NWU, 2016:4).

Conclusion

Transformation in HE in South Africa cannot be limited to decolonizing the curriculum through a mere reconsideration of curriculum content to be learnt and methods of teaching and learning. Thought should be given to contextualizing the curriculum to ensure national and international relevance and internal and external responsiveness. Program or discipline and institutional, national and international contexts influence the curriculum planning process, and therefore any planning for curriculum change or transformation should consider these contexts, especially since they are ever-changing. Contextualizing the curriculum at an international level ensures that South Africa and Africa’s tertiary education maintains a high standard of teaching, research, catering for the needs of domestic and international audiences, on the one hand, and contributing to resolving global research challenges, on the other hand.

It is important that education leaders reflect consciously on the contextual filters that influence curriculum decisions (e.g. the general purpose of HE, national goals, student characteristics, student goals, discipline goals, institutional goals, pragmatic factors, pedagogical literature, facilities and opportunists, among others) to transform HE. Lastly, curriculum design should include all stakeholders that are affected by the curriculum so as to build education for change.

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CHAPTER 6:

Decolonising South African higher education: Transforming curricula by addressing dichotomies

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Abstract

In the current South African higher education landscape much salient writings, institutional approaches, as well as the South African constitution and legislation present a host of dichotomies in attempting a unified approach to decolonising the higher education curricula. The problem is that unless South African higher education institutions acknowledge and understand the dichotomies of knowledge production, endogeneity, and actors engaged in the knowledge production, curricula decolonisation would not materialise. Examining this topic is significant because without addressing the dichotomies, exploring their root causes, and suggesting a pathway to resolve them, curriculum decolonisation would remain a myth. The authors applied critical theory as paradigm, an interpretive bricoleur frame and a deconstructionist lens to address all factors in resolving dichotomies as a way forward. The authors present a set of recommendations for South African HEIs.

Keywords: curricula decolonisation, knowledge production dichotomies, South African higher education, transforming curricula

Introduction and background

A critical review of the most salient arguments and the public policies since 1994 post-apartheid, in favour of decolonising the South African Higher Education Institutions' (HEIs) curricula, has been undertaken. Dichotomous dilemmas surfaced in search of identifying some practical ways of addressing the need for decolonisation of the curriculum in HEIs. This chapter is intended to provoke thoughts and is a call for debate and action to create a positive social impact. As the South African liberation was cemented, the underlying philosophical perspectives of (HEI) curricula became subject to discussion of radical transformation (Sheehan, 2009). Since the liberation, the call for decolonizing the curricula has been steadily rising (Hlalele, 2019). Decolonisation typically refers to the historical movements after WWII by indigenous people globally challenging colonial domination of all aspects of social, political, cultural, and economic life (Mignolo, 2011). Within the context of this study, decolonising the curricula in higher education refers to dismantling discourses and practices that perpetuate cognitive injustices (Zembylas, 2018) and prolong social exclusion (Mzangwa, 2019). The term cognitive injustice was first coined by Visvanathan (1997) which was rooted in the recognition of plurality of knowledge. Visvanathan (1997) asked for alternative paradigms of creating knowledge in diverse settings.

Chapter 2, section 29 of the South African constitution sets the requirements for educational institutions to redress the past inequities and injustices while affording individuals to be treated equally based on their languages, race, and cultures (Mzangwa, 2019; South African Government, n.d.). Consistent with the constitution, South African HEIs have articulated their mission and values and provide wide-ranging statements about incorporating the constitutional requirements. For example, the University of Cape Town (n.d.) offers a cursory perspective, including a broad spectrum of diversity. In

contrast, the University of Pretoria (n.d.) provides a more precise language for inclusion, addressing specific categories such as culture, language, to mention a few. NWU (n.d.) puts forth an accurate and direct statement about addressing decolonisation and establishing equity based on pre-apartheid injustices—explaining its roots, its connection to South African society, and how to begin addressing it in redesigning the HEI curriculum. Yet, neither the constitution nor the HEIs approaches can address the fundamental obstacles in redesigning the curriculum—dichotomies of praxis. Four dichotomies exist. They are 1) the imbalance of racial presence in the dyadic teaching and learning process, 2) the lack of clarity of what South African learners' underlying value system is based on immersion in Western and Arab cultures over sustained long period, 3) dominance of what is non-South African in HEIs knowledge production and 4) dissemination and competing principles in the South African constitution and higher education legislations.

The problem and its significance

The problem is that unless South African HEIs understand and realise the dichotomies of knowledge production, endogeneity, and actors engaged in the knowledge production, curricula decolonisation would not materialise (Mbembe, 2016; Uzomah, 2018; Zinga & Styres, 2019). Examining the topic is significant because without addressing the dichotomies, exploring their roots, and suggesting a pathway to address them, curriculum decolonisation would remain a myth. Etieyibo (2021) in agreement with the authors of this chapter asserted that it is significant to address the extent of colonialism and its impact on curriculum development by examining the dichotomies.

Decolonising the South African HEIs' curricula requires paying close attention to the voices included in the knowledge production, the resources used in facilitating the process, and understanding the connection between society,

practices of various fields, and the academy (Charles, 2019; Mbembe, 2016). The remainder of this chapter is organised as follow: (1) providing perspectives on how we should define decolonisation of HEIs curricula in South Africa and offering a way forward, (2) who are the actors in the South African knowledge creation process, (3) in the context of the first point, what is the knowledge production and how is it created in South Africa, (4) etymologically, knowledge creation and HEIs curricula decolonisation is bound by language, requiring hermeneutic examination of its ontology and epistemology, and (5) discussion and a way forward in addressing the dichotomies.

Conceptual framework and methodology

The conceptual framework that grounds this work is interpretive bricoleur in respect to what shapes the authors' personal history, biography, gender, social class, race, and ethnicity and those of the people in the setting as they examine the topic and suggest pathways (Denzin & Lincoln, 2018), and hermeneutic to address the ontological and epistemological nature of language (Gadamer, 1997). In examining the elements factored in decolonisation of HEIs curricula transformation, the authors adopt Derrida's deconstructionist approach to critical theory in examining the setting as created by language (Tyson, 1999). The authors will apply critical theory as paradigm, an interpretive bricoleur frame and a deconstructionism lens as approach to all factors addressed in resolving dichotomies as a way forward.

Perspectives on curricula decolonisation in South Africa

There has been a plethora of recommendations of what decolonised curricula should look like in abstraction. Some have suggested that curricula

decolonisation requires an imaginative review of the spectrum of mental states, attitudes, and values rather than readjusting the topics (Maserumule, 2015; Mgwashu, 2016). Lebelo et al. (2021) and Chikoko (2021) proposed that decolonising should be considered as a product, process, contextual makeup, and praxis in the South African curricula.

Some scholars have moved away from abstraction to provide relevancy to practice. Calitz (2018) suggested that until a genuine dyadic relationship across the black and white culture can be created in HEIs, curriculum decolonisation will not materialise. Considering the history and culture, Le Grange (2021) viewed South African curricula decolonisation only possible if we move from rediscovery to action, leading to individual liberation. Kaya and Seleti (2013) argued that integrating the African indigenous knowledge system may be one way to decolonise the South African HEI's curricula. Mubangizi and Kaya (2015) saw the integration of local culture in the teaching and learning process and diversity of perspectives practiced at North-West University and KwaZulu-Natal University in South Africa as another way to decolonise the curricula.

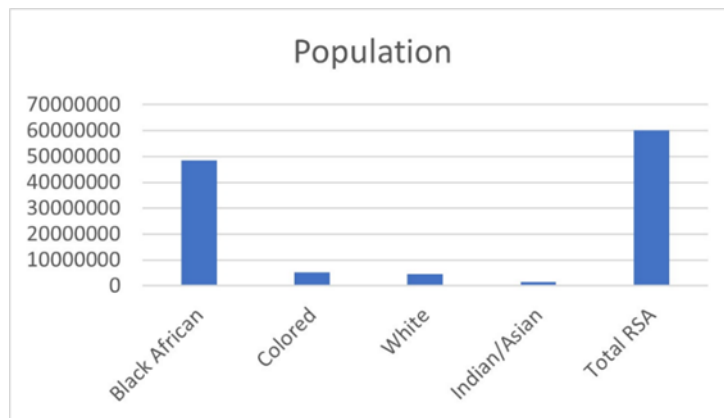
Like Etieyibo (2021), others realised the spatial nature of colonialism and sought to decolonise the curricula by liberating Africa epistemologically. This group saw the recent attempts as nominalism without much attention to ontological and epistemological underlying factors of colonialism (Dube, 2021). Additionally, although curricula had been addressed from a range of disciplines such as philosophy, literature for example, it has not been thoroughly reviewed by the educationalists (Leibowitz, 2017). Regardless of the grouping, all current literature focusing on decolonising the curricula in South Africa have failed to clearly explain the following three issues: (1) the actors in the process and what each group or category of actors should do, (2) how we should deal with heterodox nature of knowledge, and (3)

etymology as manifested through ontological and epistemological language (hermeneutics) conveying both the explicit and tacit knowledge academically. We will refer back to these three issues in our final discussion for a way forward.

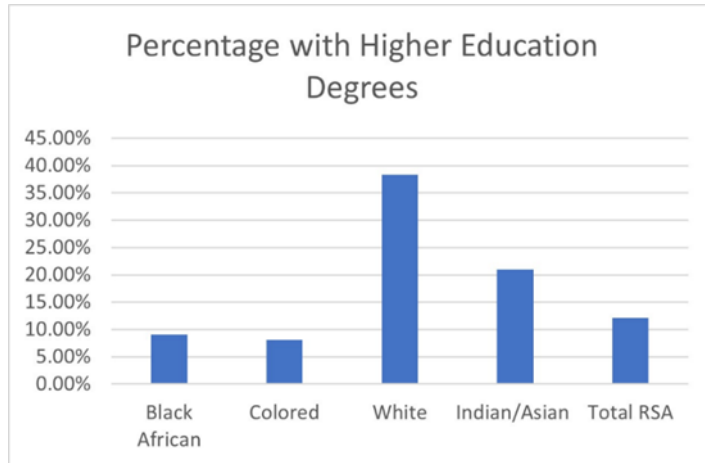
Actors in the knowledge production process

Knowledge is produced based on the dyadic exchanges between the learner and the teacher.¹⁶ Examining the percentage of the actors by race may provide a clue about knowledge production and hence, offer us a glimpse of one of the dichotomies in curricular decolonisation. Although Blacks comprise 80.9 (As shown in Graph 1) percent of the total South Africans population, only 9.1 percent of them have attained any post-secondary degree (As shown in Graph 2).

South African population by race



¹⁶ The author defines knowledge production as the result of dyadic information exchange process between the learner and the teacher where the synthesis and analysis of information leads to learners' formation of usable knowledge to apply to various situations.

Figure 1: Based on South African Government (July 19, 2021) report***Percentage of South Africans with any post-Secondary education*****Figure 2: Based on South African Government (June 3, 2021) report**

Among the factors that shape the curricula as a system of knowledge production are the HEIs researchers who typically include professors and associate professors. Both male and female Black South Africans respectively comprise only 6.4% and 1.6% of the total professors and associate professor positions at HEIs (As shown in Graph 3).

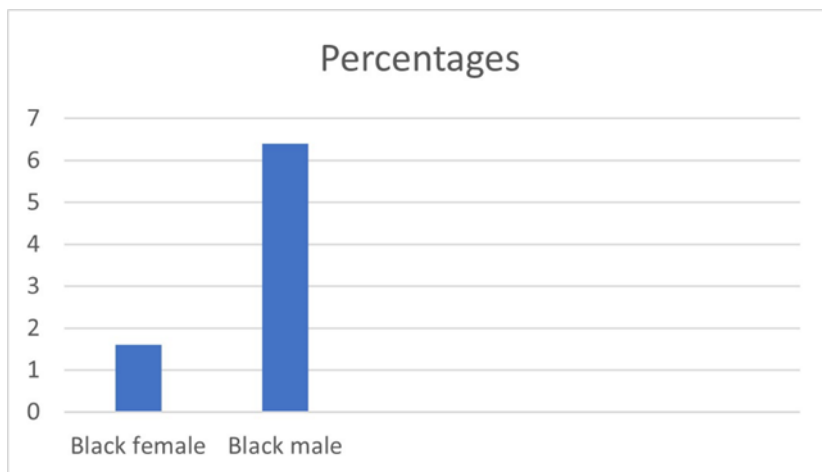
Percent of Black professors and associate professors in HEIs

Figure 3: Based on Africa Check (2014) information

Due to a small pool of Black post-secondary students, professors and associate professors, there has been an insufficient impact on the dyadic exchange relationship, resulting in less than expected decolonised curricula. Therefore, lack of presence by sufficient Black professors, associate professors and research students has been one reason for inadequate transformation for decolonising the South African HEIs (Watony, 2012). Therefore, moving the needle for decolonising the curricular knowledge production has been unrealistic. Based on the small percentage of academics and students engaged in the dyadic knowledge production, the curricula transformation for decolonisation has been unfavourable despite various constitutional and institutional mandates and strategies.

The second set of actors influencing the curricula decolonisation process have been the HEIs and the South African government. Each had played different roles. As Fomunyam (2017) explained, the South African HEIs have been the subject to a barrage of demands to stop catering to the marketplace for consumption of knowledge and simply producing a skilled labour force (Higgs, 2016; Paphitis & Kelland, 2016) which has been seen as the cause of Western dominant technological knowledge production.

The third set of actors include the decolonising curricula protagonists and often misplaced expectations of realities. Forsdick (2018) noted that decolonisation is a process that occurs through cultural agency, drawing on the production of novels, poetry, theatre, law, philosophy, or political theory to mention a few. However, Haase (2010) cautioned against excessive emphasis on the tale of cultural agency, which may lead to unwarranted biases, perpetuating false representation of dominant colonial powers.

The fourth set of actors have been the South African government and its principal agents. In 1997, the Higher Education Act 101 (Republic of South Africa, 1997) detailed competing principal mandates in higher education, impacting decolonisation transformation. Notable among the mandates were the competing focus on programme development in responding to freedom of religion, academic freedom¹⁷, and economic development needs. Although each principle in the Higher Education Act of 1997 was of importance, combined, they created obstacles for decolonising to transform the curricula. Subsequent amendments between 1998 and 2016 provided refinement in the bureaucracy of HEIs rather than substantive changes in the way teaching and learning should take place (South Africa Government, 2021). To explain the conflicts among the Higher Education Acts' principles, the authors will firstly examine the respect of religious freedom¹⁸ and its relations to decolonisation concept. While 88% of the current South African population is Christian, approximately 8% arrived in South Africa as Christians (See Table 1 and 2).

17 The challenge with religious and academic freedom is that the extent each is practiced, the level of meaning abstraction in each of the terms, and how the two impact the other. For example, if one is Zulu, converted to Christianity, and teaches in a higher educational institution, how does the individual reconcile a Zulu way of thinking, Christian moral values, and exercising academic freedom to remove Western ideas from the teaching process and finding a pathway to indigenizing learning.

18 We define religious freedom as people's right to live, speak, and practice social norms according to their moral beliefs which may include how they teach others and how they learn.

Table 1: Percentage of religious affiliation of South African population

Religion (2015 est.)	Percentages
Christian	86
ancestral, tribal, animist, or other traditional African religions	5.4
Muslim	1.9
nothing in particular	5.2

Based on CIA Factbook (2020)

When indigenous South Africans were converted to Christianity around middle of 16 century (BBC, 2014) they assimilated to Western values, educational thinking as communicated by the then missionaries, and became alienated from who they were epistemologically—as the authors will address later in the knowledge creation hermeneutics.

Therefore, it is somewhat unsettling when everyone insists that we should decolonise something as one would attempt to free ‘Winston from the horror of Ministry of Truth’ in George Orwell's 1984 novel (Orwell, 1961). It is not clear how one can free anyone from the perpetuated falsity of Western ideas ingrained in most of the South African population through church, its value system, and the schooling that has expanded its philosophy to reach the unconscious level of people’s mind. Second, academic freedom to express one’s ideas without risk of disadvantage or professional interference tends to favour those who have very little incentive to transform the HEIs curricula to decolonise it, as deduced from Table 3 above that more than 90 percent of the professors and associate professors are White. Unless the government and the HEIs can provide incentives to encourage the White majority of academics to use their academic freedom for curricular transformation, the process would stay very slow. Third, operating in the Industrial Revolution 4.0, when developing skills to address economic development (Kazeroony & Tsang, 2022), requires adhering to the Western models of teaching and

learning to instil competencies in each graduate applicable to working with artificial intelligence, robotics, and computer programming across disciplines.

Knowledge production and curricular transformation in South Africa

It is essential to address knowledge production as a precursor to curricula transformation for decolonisation. As stated earlier, knowledge production is a dyadic process between learner and teacher. When there are not many of a particular grouping, knowledge production becomes dominated by those who are in the majority. The findings, therefore, require us to examine the nature of knowledge production, particularly in South Africa, and how curriculum design is influenced by it.

Knowledge production in South Africa

From a universal perspective, producing new knowledge requires imaginative and reflexive deconstruction, reconstruction, testing, and applying (Harvey & Knight, 1996). As one moves from imagining to reconstruction, knowledge production requires applicability or some use by the community to produce it and be subject to social accountability for its purpose (Gibbons et al., 1994; Giroux, 1992). Knowledge production should be flexible to address scientific, technological, and industrial needs as appropriate (Waghid, 2002). Knowledge production is dynamic and requires a heterodox orientation (De Eguia Huerta, 2020; Fataar, 2018) if one aims to decolonise it. This means that knowledge production methods that may be radically different from or contradict those in use should be embraced.

In the South African context, knowledge production requires humanisation to address its problems (Waghid, 2002). Yet, for practicality, to increase the

number of skilled graduates who can represent the diverse South African population and the needs of the labour marketplace, knowledge production requires transformation (Winberg, 2006). To address skill sets matching the industries' needs, by necessity, the South African curricula has become subject to the South Africa Government (2021) Higher Education Act 101 of 1997, responding to the human resource needs and economic development. Therefore, once again one of the 1997 Act's principles stands in the way of curricula decolonisation. The alternative to transform knowledge creation requires the government to help encourage Africanising publications based on HEIs research that can connect the social needs to the curricula transformation (Zegeye & Vambe, 2006), which neither the constitution, nor the subsequent legislations, or their amendments have provided.

Curricula design to decolonise knowledge production

Curricula design and knowledge production transformation for South Africa requires examining a few arguments from the current literature. First, the current literature points to the oppression and dominance by the colonisers regardless of the place, and irrespective of the land as the source of colonised curricula design. From Mohawks of Mississauga, Ontario, Canada to IsiZulu of KwaZulu-Natal, the colonised seek to free themselves from oppression of dominant episteme. So, some scholars have suggested to decolonise the curricula and knowledge production from indigenous perspectives. Zinga and Styres (2019) suggested that educators must engage in own self-reflection and examine effective design opportunities to engage students with challenging course content and how they are implicated in and informed by the very things that they are asking students to examine things critically. Uzomah (2018) argued that to rid of Arab and European colonial education in creating knowledge, educational policies must become homegrown or contextualised.

Second, as the current literature reveals, some scholars have attempted to claim that autochthonous knowledge creation can exist along with other forms which can lead to decolonising the curricula (Zoogah, Gomes, & Cunha, 2020). The word autochthony is derived from Greek word αὐτός *autos* "self," and χθών *chthon* "soil," referring to the original indigenous inhabitant of the land. There are two fundamental challenges with the knowledge integration proposal by Zoogah, Gomes, and Cunha (2020). First, it is not clear how they propose to cleanse Africa of the invading inhabitants' knowledge who have been living in Africa since Arab invasion of North Africa and European who arrived few centuries later. Second, as Fataar (2018) argued that the integration of indigenous and Western knowledge in the South African context is untenable. Because autochthony can only exist in its pure term, otherwise, we have a mix of indigenous and people who are descendants of immigrants who see their knowledge as much a part of Africa as anyone else.

Third, one should examine other challenges in addition to what is residing within the HEIs setting. Saurombe (2018) argued that often, at least in the South African context, the challenge of decolonising the curricula resides outside the academia. Saurombe (2018) suggested that to transform the curricula and decolonise it, we must critically examine the archival history of South Africa and the way HEIs have been systematically engaged in the non-South African knowledge production to effectively address the issue. Indeed, the curricula transformation can only happen if words translate into action and policies move from shelf where the ideas are rested to the HEIs impacting the dyadic interaction of teacher and student (Fomunyan, 2017).

Knowledge creation philosophy: the hermeneutics

Episteme, derived from Latin word ἐπιστήμη, meaning science or knowledge, is a philosophical term which is subject to different approaches, e. g., realism,

positivism, etc. (Frick, 2017) leading one to understand what is known. Therefore, how one creates knowledge depends on one's approach. For example, a medical doctor, more than likely, will follow a positivist path, based on a set of assumed principles and observations through regimented experiments, quasi experiments, or non-experimental approaches to learn the best course of action for the patients; the doctor learns through doing and working with objective facts as they are observed as would an engineer through understating the system design and connectivity of the parts (Von Bertalanffy, 1972; Kuhn, 1996).

Regardless of our approaches to knowledge creation, knowing is rooted in the consciousness, as communicated by humans through language, effected and teleologically positioned to reflect history (Gadamer, 1997). Philosophical hermeneutics help us grasp how our understanding is manifested in our consciousness (Gadamer, 1997). Yet, what we know is not devoid of prejudice and prejudgments (Van Manen, 2014). Recapturing the essence of what we just laid out, knowledge is communicated through language in texts in a dyadic relationship of teaching and learning by the teachers, professors and associate professors following the Western tradition (at least the majority) such as empiricism, realism, idealism, to mention a few. The other part of the equation of teaching and learning are the students whose language vary in the South African context (See Table 2) and hence breaking the harmonious transmission and relationship of the text as it moves between the teachers and the learners.

Table 2: Percentage of official languages spoken in South Africa

Official Languages (2017 est.)	Percentage
isiZulu	24.7
isiXhosa	15.6
Afrikaans	12.1
Sepedi	9.8
Setswana	8.9
English	8.4
Sesotho	8
Xitsonga	4
siSwati	2.6
Tshivenda	2.5
isiNdebele	1.6
Other	1.9

Based on CIA Factbook (2020)

Gadamer (1997) argued that language, etymologically, is the communication of a perceiver of experiences and the meaning the receiver understands from what is described. Indeed, Gadamer viewed language as dyadic phenomenological exchanges—bound by teacher-learner dyadic interaction in knowledge creation. Merleau-Ponty (1964), in response to Gadamer, argued that language is a subset of perception, which allows arriving at universal understanding. Therefore, the text and its medium of transmission, the language remain a challenge at the core of curricula transformation, reconciling the perceptions and universal understanding (Dube, 2021) for decolonising HEIs. Mgqwashu (2014) suggests decolonising the curricula and transform HEIs epistemologically and ontologically, the use of isiZulu would allow revival of South African culture. Yet the majority of those who influence the process of teaching, the professors, and the associate professors, predominately publish in English and some in Afrikaans, although no reliable statistics exist to compare the publication of this group in each of these two languages. Those who are on the receiving end, doing the learning, have a

more complex situation. As Table 4 shows, while over 80% of the population are bound by Christian values they adopted over four centuries ago, they diverge (See Table 5) in communicating ideas, arts, physical and metaphysical understanding of the world based on their spoken languages.

Addressing dichotomies as a way forward

To address the dichotomies, juxtaposing interpretive bricoleur and deconstructionist critical theorists' positioning, the authors will first, outline and review the South African curricula decolonisation dichotomies. Second, the authors, will propose ideas to consider for debate, action, and policy formulation. Both authors have decades of experience in HEIs and have realised the gap in the South African HEIs knowledge creation process when teaching and observing learning amongst the students who are from diverse cultural and racial backgrounds. The authors' transparency and reflexive nature offers their bricolage perspectives on the topic. The authors, one male and female, allow for balancing gender perspective on the topic, while the diversity of their racial background and subjugation and divergent exposure to colonialism present a unique opportunity to discuss the topic at hand. One author has been subject to colonial rule and forced to abandon his homeland and seek refuge in the land of colonists where he was further exposed to oppression culturally, socially, and epistemologically. The second author, although of White descendants of African colonisers, was of an extreme modest family means and equally subjected to reverse discrimination while settling in South Africa. Therefore, for transparency and the views expressed in interpretive bricoleur manner, it is important that the reader knows what the authors are stating are simply meant to arrive at a workable solution in decolonising the South African HEIs curricula, to ensure inclusivity, rather than masking the important perceptual issues.

Recapping our main points, as shown in Tables 1 and 2 above there is an imbalance between the influencers teaching and the learners. There are for example too few influencers other than White as teachers in relation to the overall population (Shown in Table 1). As the data showed, the South African HEIs are dominated by large percentage of White academics comprising the dyadic nature of knowledge production. As Table 4 showed, 86% of South Africans are influenced by religious belief that was imported by the colonisers muddying the indigenous population value system as a distinct criterion to address curricula decolonisation. Therefore, the domination of the HEIs by a small minority of Whites and the overriding colonisers value system transferred through religion has led to non-South African dominance in knowledge production. Also, inherent contradictions in the South African Constitution and subsequent legislations, although well-intentioned to address the problem of equity and inclusion have allowed for the continuation of the dominance of colonist approach to knowledge production.

The Way Forward

So, how do we move forward? First, putting on our critical theorists' hat, proverbially speaking, would allow for understanding the construction of knowledge in society generally, and in institutions such as schools, hospitals, and governments (Reeves, Albert, Kuper & Hodges, 2008). Second, adopting a deconstructionist view and critical theory will afford us the ability to think critically through experiences built into language (Tyson, 1999, p. 241) to decipher the hidden meanings. Third, using hermeneutics would help us uncover what is the hidden part, under the water of the mental iceberg. This will explicate out understanding by offering structure to our understanding, making sense of the relationship between the author, the text, and reader and answering the question by examining the hidden realm of activity behind

the scenes of our own lives, explicating our understanding (Porter & Robinson, 2011). Finally, we offer further practices researched in other studies that might present unique pathways such as circular problem solving and practices in New Zealand Māori population.

Taking a critical theorist and deconstructionist view, the authors examined the salient writings and governmental policies. The authors, hermeneutically, reviewed the writings and the public policies based on the RSA constitution and legislations to unfold the dichotomies of curricula decolonisation. The authors provided explanation of dichotomies based on how the intermingling of colonial imposition of values, beliefs, and perspectives and indigenous acceptance of many of those elements had made the decolonisation of the curricula a murky endeavour. Yet, drawing on the present dichotomies, there are pathways that make decolonising the curricula possible.

Knowledge construction has both sociological and pedagogical roots. Sociologically, knowledge production requires reorientation by (a) obtaining sufficient resources to carry decolonised research, (b) creating African theories embedded in African languages, and decentering Northern theories (Connell, 2018). This line of thinking requires us to examine the binary conceptualisation of Whiteness and Blackness and [also acknowledge that South Africa is not just Black and White, but also Asian and Mixed races,] thus refocus on more pertinent issues such as class and economic status of students and the nature of relationship between the teacher and the learner as a way forward in decolonising the curricula (Calitz, 2018). Additionally, one must recognise, as studies in USA has highlighted, understanding the connectedness of indigenous students to land and how this connection provides a different perspective in learning which is imperative to finding our way forward in curricular decolonisation (Alejandro et al., 2020).

Pedagogically, rather than throwing out the Euro-centric knowledge production, we should focus on creating and integrating consciously indigenous learning and teaching approaches (Winberg & Winberg, 2017). Circular problem solving, exploring dissonance, incorporating the community learning needs, integrating the local elders in the teaching and learning process to understand the local sociological needs, using practicum supervisors who are deeply engaged in the indigenous culture help decolonise knowledge production and transition to decolonising the curricula (Madden, 2015). Research based on using indigenous examples such as Māori values and beliefs in educational approaches when teaching across disciplines provides one way to decolonise the curricula (Higgins & Eden, 2015). Such integrative participatory approaches require constant coordination between the learner and the teacher to ensure consistency of meaning in exchanges and creation of knowledge (Diab et al., 2020).

In conclusion, the search for knowledge creation and learning in a complex society such as South Africa, due to its historical background and vast socio-economic needs, call for constructive debate and inclusive efforts from all actors ensuring that learning takes place to progress together within South African HEIs.

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CHAPTER 7:

Reflecting on four South African case studies of experiential learning in spatial planning to inform curriculum transformation in higher education

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Abstract

Reflections on the application of experiential learning cases in South African spatial planning programs remain rare in existing scholarship and warrant further research. Critical thinking and experiential learning are prerequisites

to accredit South African curricula of spatial planning education by its professional body, the South African Council for Planners. In African contexts, approaches to spatial planning education have been highly influenced by the logic, systems, and skills of colonial-era town planning. The main argument in this chapter is that students studying in the field of spatial planning may benefit from learning through experiences with real-life situations (case studies), as these generate context-specific forms of knowledge, providing possible strategies of action and intervention in conditions of high complexity, which invariably characterise urban development problems in Africa. The concept 'learning' in this chapter is viewed from a critical social constructivist perspective as it is a social epistemology that is important for the socio-cultural context of knowledge construction, especially evident in our country. This chapter follows a collaborative reflection methodology where four cases of experiential learning (2018-2020) in spatial planning education have been reflected upon during a reflective lecturer's retreat in August 2021. The reflection was conducted in four stages, namely clarification, exploration, focalisation and interpretation. The cases include four spatial planning modules from three different year levels, focussing on different socio-spatial South African higher education contexts. The main findings that have emerged from the collaborative reflection, include that the application of experiential learning in the education of students studying spatial planning is not only beneficial to the students, but also contribute immensely towards the development of the lecturers, planning the curriculum and eventually the practice of interpreting planning practice for the purposes of teaching and learning. The study illustrates the potential of experiential learning to promote a reflective approach to learning, while fostering skill development in complex problem-solving with contemporary relevance in the field of spatial planning.

Keywords: Case studies, curriculum transformation, experiential learning, spatial planning education, South African Higher Education.

Introduction and background

More than three decades later, Manuel Castell's provocative question in the 1990s to spatial planners about the ability of spatial planning (and thus spatial planning education) to change parallel to a changing global world

(Castells, 1992:73), is more relevant than ever. The spatial planning landscape in Africa is increasingly faced with interwoven complexity and accelerated change in the configuration of human settlements. Africa, as part of a changing, developing world, has experienced the highest urban growth rate during the past twenty (20) years (Adesina et al., 2016; Human Development Agency, 2012). Simultaneously, urban changes are transpiring in urban landscapes ravaged by poverty and unemployment, where governments are least equipped to provide urban infrastructure, and urban residents are least able to afford it (Marx et al., 2013:187; Watson, 2009:160). This complex set of problems that spatial planners are grappling with in Africa, some unique to the South African context, e.g. a legacy of colonialism and apartheid (Schensul & Heller, 2011), together with continuing endemic poverty, extreme economic inequality, and spatial division, have raised concerns whether graduate spatial planners in South Africa are sufficiently equipped to address this complexity and are capable to offer unique context-based spatial planning solutions. Muller and Gibbs (2011:1) caution that, although the current training for spatial planners is well established and understood, it is primarily designed for intervention in the formal city. This concern is echoed by Odendaal (2012:8) who refers to the limited application of skills, assessment techniques, practices and community engagement mechanisms that students are equipped with to understand and develop solutions for contemporary context-based complexities that they are faced with in their careers as professionals. Furthermore, questions have been raised about the content of curricula and the extent to which graduates are adequately prepared for the workplace (Frank, 2006; Hurley et al., 2016; Taşan-Kok & Oranje, 2017). According to Odendaal (2012), it is particularly necessary in Global South contexts, where outdated pedagogical practices often fail to equip spatial planners with context-based knowledge, skills and

intellectual flexibility to deal with highly dynamic urban processes, to explore alternative spatial planning approaches to educate planners.

The core problem relates to the fact that in many African contexts, approaches to spatial planning education and curricula have been highly influenced by thought patterns that emerged from colonial-era town planning (Diaw et al., 2002). According to Oldfield and Parnell (2014), the answer for spatial planning education in South Africa is to move beyond a problematic historic legacy to generate insights that have value in specific local contexts. Watson (2002) has long argued for this deeper interaction with practice in spatial planning education. Context-based 'practices of knowing' (Davoudi, 2015), that insist on the importance of the local (South African) in spatial planning education, have the ability to bridge gaps between theory and practice in socio-culturally distinct contexts. Denoon-Stevens et al. (2020) advise that for spatial planning students, in order to develop the necessary context-based knowledge, insights and skills, planning educators need to explore complex and adaptable approaches that bring practice and theory together, in both the conventional and technical universities, by treating theory and practice as an interdependent whole. Roakes and Norris-Tirrell (2000:102) illuminate some of the advantages of exposing students to real-life contexts where they engage with members of the community including the development of social responsibility, the complexity of thought processes, advanced moral reasoning and intercultural understanding. Further to their argument, these authors highlighted the relevancy of learning from real-life cases in spatial planning, because 'effective professional practice' requires 'an operational understanding' or a practical 'competence' (Roakes & Norris-Tirrell, 2000:102). Learning by experience (or doing), referred to as experiential learning, may well equip students to become professionals who are reflective, committed, and

capable of understanding, framing and responding to the realities of planning in the real world (Balassiano, 2011).

The main argument in this chapter is that spatial planning students may benefit from learning through experiences with real-life situations (case studies) as these generate context-based knowledge and insights in order to intervene in highly complex conditions that perpetually characterise urban development problems while addressing inequality. However, according to Duminy et al. (2014), the utilisation of 'live' cases (cases where participants, in this case students, are directly involved and that are practical) in spatial planning teaching in South Africa remains limited. The call for planning programmes in South African Higher Education to equip students with the necessary knowledge, insights, and skills needed for a rapidly changing and unique context, has crystallised in a guideline document that was released in 2014 by the South African Council for Planners (SACPLAN). The importance of experiential learning to equip spatial planning students with the necessary values, attitudes, knowledge, and skills required by the new African Planning Professional, is emphasised in this guideline document (SACPLAN, 2014:32-39). Experiential learning has the potential to promote a reflective approach in learning, and to foster skills in complex problem-solving with contemporary relevance (Baldwin & Rosier, 2017; Chen et al., 2020; Kotval, 2003; Pattacini, 2018). However, reflections on the application of experiential learning cases in South African spatial planning education remain rare and these have scope for further research.

From an educational perspective, the purpose of this chapter is to reflect on the educational value of four live case studies of experiential learning in the spatial planning curriculum at a South African university, and how the outcomes of the case studies could inform the transformation of curriculum planning and teaching and learning approaches. The case studies include four

different spatial contexts and scales including Marabastad (Kroonstad), Matlwangtlwang (Steynsrus), Mokwallo (Vredefort), and the Madibeng Municipality (Brits). These different spatial contexts have been utilised to inform four modules including Urban Design, Infrastructure Planning, Land Use Management, and Strategic and Participatory Planning that are taught across three different year levels in the BSc Urban and Regional Planning curriculum at the North-West University, South Africa. Using these four South African cases of experiential learning in spatial planning education as examples, a trio of aims have informed this chapter: to reflect on (i) the value of experiential learning for students and lecturers; (ii) the value of a case study approach for teaching spatial planning modules and (iii) the implications of reflections on the above-mentioned aims (i and ii) on the transformation of planning the curriculum.

Theoretical / Conceptual framework

Spatial planning: Paradigms and theory

Appropriate and suitable teaching and learning processes are crucial for educators and students in spatial planning at all levels of education (Terlević et al., 2015:106). The formal education system plays a decisive role in teaching the values of space, as it has a significant impact on the increased awareness of relevant topics and the appropriate transfer of spatial contents. The latter is strongly influenced by the relevant paradigm, i.e. the 'organising framework for theory and research' (Du Toit, 2015:62). Accordingly, paradigms describe the nature of reality (ontology) and the grounds of knowledge (epistemology).

Before continuing to focus on paradigms and contexts that are relevant to spatial planning, one needs to reflect on relevant paradigms in education.

Paradigms within education refer to a way of thinking about the goals of education, the significance of learning, and the roles of educators and students (Baker et al., 2019; Creswell, 2014:6). Paradigms of education impact on the specific education design and practice, including assessment practices that are underpinned by epistemological beliefs of educators that impact in return on their teaching and learning approaches. Awareness of paradigmatic details and differences can support integrated and aligned teaching and assessment styles. Numerous paradigms relevant to spatial planning education do exist, including: (i) cognitivism (structuring, organising, and sequencing information in the mind to facilitate optimal processing); (ii) behaviourism (producing observable and measurable outcomes); the student as a blank slate (teacher shapes behaviour through reinforcement); (iii) transformative paradigm (emphasising equity and social justice; learners are agents of change) and (iv) cognitive- and social constructivism (facilitating the use of problem-solving skills that allow learners to go beyond the information given; emphasising social relationships; learning through participation (activity) in social contexts (communities)). While presented separately here for clarity, these paradigms may overlap in practice.

In terms of this chapter's focus, cognitive- and social constructivism denotes that learners or individual students are 'constructors' of their own knowledge, produced whilst interacting with their socio-cultural environment (Piaget, 1971). Constructivist teaching and learning methodologies are, therefore, rooted in the conviction that learning occurs when learners are not merely passively receiving information (Sjøberg, 2007:12), but are actively involved (Gray, 1997:18) in a process of learning and 'knowledge construction'.

These educational paradigms, in turn, reflect on specific planning paradigms found in the teaching, as well as the practice of spatial planning. The most relevant paradigms in the latter science include:

- The *positivist* paradigm that nestles itself in the natural sciences and reflects on universal laws that enable spatial planning to predict and potentially control the reality;
- The *interpretive* paradigm that stands at the other end of the scale and endeavours to propose or describe social action that will enable us to understand social reality;
- The *critical social science* perspective that is concerned with how research and education may potentially lead to positive social change – however, that may be measured; and
- *Pragmatism* that aims to solve problems in reality and also improve the human condition. In contrast to critical social science, it accepts a multitude of social realities in its endeavour to solve a problem. Pragmatism is well-aligned with spatial planning education, and potential employment, as it encourages learners to explore, and formulate their own conception of the real-world problems (Baldwin & Rosier, 2017). From a teaching perspective, this paradigm aims to solve problems in the real world by combining different approaches or designs to improve a particular (mostly practical / applied) situation (Du Toit, 2015:65).

The spatial planning domain, relevant to this chapter, reflects mostly on the *critical social science* and *pragmatic paradigms*.

Closely linked to these paradigms encountered in spatial planning, is the concept of *planning theory*. Planning theory is concerned with how to understand the role of spatial planners and the nature of planning, rather than advocating guidelines for how to execute planning. It reflects on a

framework for thinking about planning and the interpretation of planning practice, aiming to raise students' awareness of their own values in the said field (Olesen, 2018:304). Planning theory calls on students to become reflective practitioners, instead of relying only on technical rationality. It aims to help students understand and interpret the complex nature of spatial planning by developing the necessary sensitivities to planning issues and values. For purposes of context in this chapter, planning theory is also described as theory of planning in an effort to distinguish it from theories in planning.

Theories of planning (e.g., incremental planning, transactive planning, advocacy planning and radical planning) are referred to by Friedmann (1995) as meta-theories that assist spatial planners (including planning students) to develop a nuanced understanding of how spatial planning functions in society. These theories are referred to as procedural and normative theories (Friedmann, 1995:157). On the other hand, theories *in* planning may be considered as practical and prescriptive theories. Accordingly, theories in planning refer to substantive theories within the sub-fields of planning, such as land use planning, transportation planning, public participation, urban design, etc. (Friedmann, 2003:7). These theories are concerned with prescribing methodologies for how to do planning, or how to go about it. Theories of planning address what is common to all these theories, that is, why planning exists and what it does (Olesen, 2018:304). In short, the case studies described in the following sections reflect specifically on various modules constructed within the *theory in planning*-concept, that forms part of the *pragmatic*- and *critical social science paradigms* as described above.

Students of Urban and Regional Planning (North-West University) are thoroughly educated in the above theories in their four years of study. Based on the said paradigms, focused *teaching and learning strategies* need to

prepare them for their two-year post-graduation ‘apprenticeship’ before they may register as professionals. Numerous teaching and learning strategies exist – the traditional form of teaching in higher education mostly involves lectures that are provided to students, accompanied by tutorials, and in some instances, independent study. However, there are several other modes of delivery that may be more effective, given the level of education, the size of the groups and the specific subjects relevant thereto (LLI, 2021). Examples include problem-based learning, flipped classroom, experiential learning, critical thinking, etc. For purposes of the students in spatial planning, it is deemed important to focus on *critical thinking* and *experiential learning* – the latter is also a prerequisite of the Urban and Regional Planning curriculum accreditation as required by its professional body, the South African Council for Planners (SACPLAN, 2014:32).

Experiential learning

Experiential learning was originally coined in an effort to link theory to actual practice within the educational sphere. This concept proposes learning as the process whereby knowledge is created through the transformation of relevant experience (Lewis & Williams, 1994). *Experiential- or work-based learning* is the process of learning through experience and then reflecting on the experience of doing. Numerous definitions and interpretations exist as such, but in principle, ‘*work-based learning is the term being used to describe a class of university programmes that bring together universities and work organizations to create new learning opportunities*’ (Lemanski et al., 2011:5). Urban and Regional Planning, as applied science, has been shown to especially benefit from an experiential learning approach (Baldwin & Rosier, 2017; Kotval, 2003). Accordingly, the approach described in the case studies (see section entitled ‘Contextualising the four cases reflected upon’) reflects on the formalisation and coordinated interaction between real-world

problems and challenges, with students in the more advanced stages of their studies.

Experiential learning as a teaching strategy in this spatial planning curriculum practically plays out in various settings and environments; for example, in a 'workshop environment' or a 'field trip' facilitated by professional planners. Within the concept of experiential learning, more detailed approaches are relevant, e.g., Problem-Based Learning, which is a teaching method utilising complex real-world problems as the means to promote student learning (Duch et al., 2001:5). Another method used in this research relates to Project-Based Learning (working on a project over a prolonged period of time), as well as Technology-Enabled Learning (increased technology use in preparation for their working lives) (Blumenfeld et al., 1991:370; Kirkwood & Price, 2016). Accordingly, students are exposed, in relatively small groups, to the challenges spatial planning practitioners and stakeholders face on a daily basis. These workshops, excursions, etc. are preceded by supporting teaching and learning strategies in class, i.e. blended learning in order to induce critical thinking.

A critical thinking thought process entails collecting information and data, asking thoughtful questions, and analysing possible solutions - an analytical process where facts are analysed to develop a problem or topic thoroughly. In this type of thinking the lecturer not only promotes thinking, but also expects it in the various assessment approaches (Liljedahl, 2016:364). Critical thinking is encouraged and fostered during the blended learning approach followed, through (i) the type of assessments used and how they are used; (ii) the way in which assessments are given to students; (iii) how questions are answered when students compile assessments and (iv) by constructive feedback in an assessment to develop the assessment itself into an opportunity for learning.

In conclusion, the outcomes of the said spatial planning curriculum are mostly founded on a cognitive and social constructivism paradigm as applied to spatial planning (Creswell, 2014:6). The emphasis is also on advocacy planning within a postmodernist society, with a detailed focus on planning theory, i.e., land use planning and management. It is 'delivered' to the students by means of blended learning, critical thinking, and specifically experiential learning.

Methodology

For the purpose of this study, two groups of participants can be distinguished: (i) Primary participants including the lecturers themselves who have conducted critical reflections in a collaborative peer-group discussion of their own experiences and interpretation of the value of the cases of experiential learning as obtained from students' feedback; and (ii) students as secondary participants who have been enrolled for four spatial planning modules in a specific time period (2018-2020) and whose feedback (in multiple forms relevant for each of the four modules) has been analysed by each individual lecturer and discussed with peers.

This section contains a systematic presentation (Gray, 2014:731) of how the research has been conducted by including the approach, design, and method that were chosen as appropriate within a social constructivist framework (see Figure 7.1 below). Further to this, the establishment of trustworthiness and addressing of ethical aspects are dealt with in the concluding part of this section.

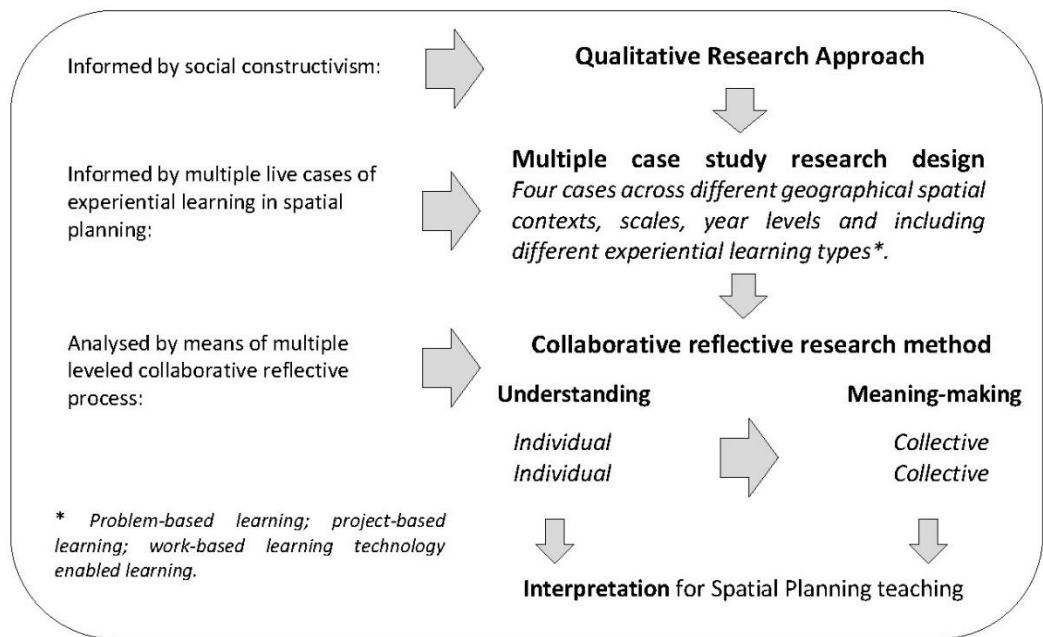


Figure 1: Methodological framework (Source: Own construction)

Research approach

In support of the *critical social science*- and *pragmatic paradigms* referred to above, a qualitative approach has informed the research, as qualitative investigations aim to develop in-depth contextualised and nuanced understandings of a phenomenon, rather than seeking numeric representativeness as required in quantitative research (Hennink et al., 2020:17). According to Duminy (2015:442), qualitative research in the South African spatial planning context warrants further investigation, as many researchers (and practitioners) still propagate survey-based methods and statistical techniques as the most important. The complexity of qualitative research as described by Creswell (2007:35) as '*an intricate fabric composed of minute threads, colours, textures and blends of material*' provides much of the flexibility and creativity that is needed to explore experiential learning application in spatial planning curricula in South African contexts. Further to

this advantage, a qualitative approach may well provide empirically supported findings with transferrable knowledge pertaining to students' learning process. In this chapter, students' learning through experiential learning was considered and reflected upon.

Research design

A case study research design was employed by building multiple 'live' case studies of experiential learning in four different modules (each module accommodating approximately thirty students) that are offered as part of a spatial planning curriculum (BSc Urban and Regional Planning) at the North-West University in South Africa. While case studies are well documented in spatial planning research (Du Toit, 2015; MacCallum et al., 2019), the need for more case study research in spatial planning is emphasised by authors such as Duminy (2015); Duminy et al. (2014); Flyvbjerg (2011); and Kotval (2003). The reason for propagating the inclusion of more case studies in the education of planning students revolves around their potential to generate an in-depth understanding of dynamic processes in different settings and can thus generate context-dependent knowledge – knowledge that is much needed in spatial planning in Africa, as explained in the introduction. MacCallum et al. (2019:44) warned that spatial planners lean towards an overemphasis on broad-scale data-driven research to generalise findings and sometimes fail to provide the detailed information and understanding that is needed to plan for complex interactions that make specific places unique. According to Flyvbjerg (2011:303), the use (or building, in this case) of good and well-presented case studies have the potential to evolve into a 'nuanced view of the realities spatial planners are faced with'. It is this latter advantage of case studies that initiated the generating of 'live' case studies as a learning platform for students to learn in an experiential manner about real-world planning scenarios. The use of live case studies was accordingly considered

as useful learning opportunities in a South African context. Duminy et al. (2014:440) motivate the value of these type of case studies in Africa to be: (i) the value that is offered to spatial planning students in terms of the development of insights into context-based dynamics and needs of communities; (ii) the possibility to develop skills and competencies required for planning in contemporary African contexts and (iii) to sensitise spatial planners to contextual realities. In summary, case studies provide the type of rigorous and exhaustive analyses that are necessary for spatial planning students regarding the attention to details of events and realities as they manifest in a specific natural setting.

Research method

The method utilised for the purpose of this discussion is a collaborative reflection (Clarà et al., 2019) on the 'live' case studies, based on students' feedback in the form of reflective essays, questionnaires, and reflective focus group discussions. Reflection lies at the very core of education programs (Buschor & Kamm, 2015; Jarvis et al., 2014; Korthagen, 2001; Postholm, 2008) and is a learning process, not only for students but also for those who teach (Lin & Lucey, 2010:51). In this particular case, the various datasets that were generated within the cases, were individually analysed by the lecturers as a point of departure for the critical reflection on which this chapter is based. The data generated by students within the particular cases are, however, not reported on in this chapter. This is due to the focus not being on the datasets themselves, but rather on the lecturers' collaborative reflection about the learning outcomes of the experiential learning cases.

To make sense of the experiential learning experience, the value and implications thereof were reflected upon (Cambridge, 2021). The method that was employed in this instance is what Rodgers (2002:845) refers to as

‘reflection on reflection’, where the educators (lecturers) conducted a small group reflective retreat in 2021 about the students’ feedback on their learning process in participating in - and the educators’ experience of employing - case studies as part of experiential learning. The reflective retreat was structured around four phases of reflection suggested by Clarà et al. (2019) including: (i) clarification, (ii) exploration, (iii) focalisation, and (iv) interpretation and have been applied as illustrated in Table 1.

Table 1: Stages and application for a reflective collaborative retreat of students’ learning

Phase:	Purpose:	Application:	Outcome:
	To obtain understanding and insights about how experiential learning was integrated with the live case studies.	Open-ended non-structured individual presentations (discussions) about each lecturer’s experience of using an experiential learning case study in his/her module was delivered for this first part of the collaborative reflection process. These presentations included: (i) the spatial planning problem(s) addressed by the respective case studies; (ii) the aims of the experiential learning live case studies; (iii) the methods, tools and techniques employed by the students to generate data within the cases; (iv) the procedure that was followed within the module, and (v) what the outcome of the experiential learning exercise was (e.g. drawing a plan, building a scale model etc.). The presentations were followed by a focus group discussion, i.e. individual questions and answers from the group for clarification purposes.	Individual understanding of the case studies that were employed in the teaching and learning of the various modules and how experiential learning was employed;
Exploration:	To critically reflect on the various types / levels of learning that took place during the live case studies.	Structured facilitation by one of the lecturers to allow for a collective discussion about students’ learning process, based on students’ feedback on their participation in the live case studies. Feedback from students included a combination of reflective essays, questionnaires that were completed and reflective focus group discussions that were facilitated by the lecturer(s). During this stage, discussions moved from individual presentation (analysis) to collective synthesis using students’ feedback as the main points of reference.	Collective understanding (synthesis) of the value of experiential learning that emerged from the four live case studies of experiential learning across year levels and modules.

Phase:	Purpose:	Application:	Outcome:
Focalisation:	To evaluate the usefulness of experiential learning in teaching and learning in spatial planning education within this specific planning curricula.	This phase included a structured discussion to evaluate the value of the case studies for students by extracting key focuses (themes) of learning that took place across the four different modules. What was critical in this phase was the ability to weave meaning among the threads of experiences of students.	Individual meaning-making by reflecting on core focuses of learning that emerged from experiential learning in case studies.
Interpretation:	To contemplate how students' learning can be utilised to transform these specific modules that are part of the spatial planning curriculum.	The practical implications of curriculum transformation within and across the four different modules were discussed to consider how the value of experiential learning may be maximised.	Collective meaning making by reflecting on practical implications of learning that emerged from experiential learning in case studies and interpretation of these for the purpose of spatial planning teaching and curriculum transformation

Source: Own construction based on Clarà, Mauri, Colomina, and Onrubia (2019)

The ideas resulting from the collaborative reflection were converged (Cambridge, 2021) for a broader understanding of the value of experiential learning and utilising case studies in teaching and learning and their implications for curriculum transformation in spatial planning education. Reflection in this case entailed an integrated and reciprocal process during which thinking, and processing of information shifted between individual and collective understanding, meaning-making and contemplating about how experiential learning can be utilised as a platform for curriculum transformation.

Trustworthiness

Qualitative research should not be judged through a quantitative lens, as this may well lead to the application of procedures that are inappropriate to qualitative research, with the potential danger of the discarding of good quality research, or the acceptance of research that lacks the real depth, good qualitative research is supposed to illustrate (Welch & Piekkari, 2017:717-718). Trustworthiness was established by employing a five-tier strategy. Firstly, by being transparent in acknowledging that all data were interpreted based on the knowledge and experiences of the lecturers. Transparency is a way of establishing trustworthiness in research (Watt, 2007:85) that adds to the sincerity of the research – a criterion that in itself adds to the trustworthiness of qualitative research (Tracy & Hinrichs, 2017:3). Secondly, credibility in this research was established through triangulation and crystallization as suggested by Ellingson (2014) and Tracy and Hinrichs (2017). Triangulation was employed by collecting multiple forms of feedback from the students about their experiences of experiential learning in the different cases e.g. open-ended questionnaires, reflective essays and class discussions – these were all considered during the lecturer’s peer reflective discussions in order to allow for multiple points of view of the datasets to converge. Supplementary to triangulation, crystallization was applied. Just as crystals have several facets that comprise their overall shape, analyses about research cases can gain credibility by including multiple researchers (different lecturers in this instance) that represent different ways of understanding the world. A third way that allowed for trustworthiness was through transferability. Similar to credibility that is applied in quantitative studies to confirm trustworthiness, transferability in this study (the ability of the outcomes of a study to be replicated) was possible due to the opportunity to consider multiple interpretations of the students’ feedback from five different lecturers including four different cases of experiential learning

across different year levels as experienced in different socio-spatial contexts. Fourthly, reflective interpretive memos were generated continuously during the interaction with the data to build an audit trail to document ideas, thought processes and interpretations of how students have experienced and perceived the experiential learning cases (Chun Tie et al., 2019). A fifth way that allowed for trustworthiness was through meaningful coherence (Tracy & Hinrichs, 2017:9) by employing methods and procedures that fit the goals of the study (to reflect on experiential learning case studies) and the interconnection of relevant literature, interpretations, and findings.

Ethical considerations

In this particular research, reflexivity was conducted as an ongoing sensitising notion to enable ethical practice to occur throughout the complexity and richness of the research process (Guillemin & Gillam, 2004, p. 277-278). Being reflexive in an ethical sense means acknowledging and being sensitised to the micro-ethical dimensions of research practice and thus being alerted and prepared to deal with the ethical tensions that arise. Further to the reflexive principle that has been maintained throughout the reflection phase of the research (as reported in this chapter), ethics have also been addressed in the live case studies by means of informed consent forms (as suggested by Brinkmann and Kvale, 2005:266–269) that were completed by all students and community members who participated in the ‘live’ case studies. The voluntary nature of participation (without remuneration), anonymity and transparency about the research as well as the future use of data were included in the consent forms. It should be noted that some of the case studies each went through ethical scrutiny at the relevant Ethics- and Gate-keeping committees of the Higher Education Institution (HEI), and were cleared as such.

The process of understanding, meaning-making, and interpretation as illustrated in Table 1 were constructed in the context of students' learning and the reflection upon the learning that took place. The context of their learning, namely 'live' case studies in different spatial study areas, are sketched in the subsequent section.

Contextualising the four cases reflected upon

The methods, context, and experiential learning experiences of the four modules that were collaboratively reflected upon are presented in Figures 2-5 to contextualise these four case studies. Each case utilised experiential learning to enhance the teaching and learning experience of students from their second year of study to their fourth year. The students were exposed, on different occasions, to a variety of human settlement typologies and engaged with, and learned from, various role-players within the spatial planning process. Further to this, they practically experienced a variety of skills and theoretical constructs required for African Planning Professionals (SACPLAN, 2014:32-39). Knowledge was, therefore, constructed by the students themselves whilst interacting with a variety of socio-cultural environments.

MODULE NAME: URBAN DESIGN **YEAR LEVEL: SECOND YEAR**

Place-Making

The purpose of the module Urban Design is to equip undergraduate Planning students with design-thinking knowledge and skills to develop proposals to transform urban spaces into a vibrant public places for people (a process referred to as place-making).

EXPERIENTIAL LEARNING METHODS

Problem-based Learning

- Learning takes place during practical experience
- Students obtain in-depth insights of *place-making* while participating in a live case study

Reflective Practice

For Constructivist Teaching and Learning, students reflect on experiences during the process of experiential learning

CASE STUDY CONTEXT

Marabastad, Kroonstad, Free State Province, South Africa




Urban (Formal Township)

Marabastad, Kroonstad provides rich opportunities for students to learn how place-making can be utilised to transform segregated urban space, influenced by modernism and apartheid, into vibrant public places for the community.

EXPERIENTIAL LEARNING EXPERIENCES IN CASE STUDY 1



Students participating in a guided transect walk to explore Marabastad through the eyes of the community.



Students learning how to engage with communities by means of interviews.



Students experimenting with different concepts as design solutions for Marabastad.



Students discussing their design ideas with community members.



Students applying their knowledge and skills to present ideas for place-making in Marabastad.

Figure 2: Problem-based experiential learning

Figure 2 presents problem-based experiential learning within the NWU Urban and Regional Planning module, Urban Design, where students have visited Marabastad (Kroonstad) twice during their semester and implemented participatory methods to constructively learn about *place-making*. This experience was gained parallel to engaging with theory, allowing for co-learning and theoretically exploring observations that have not originally been part of the curriculum.

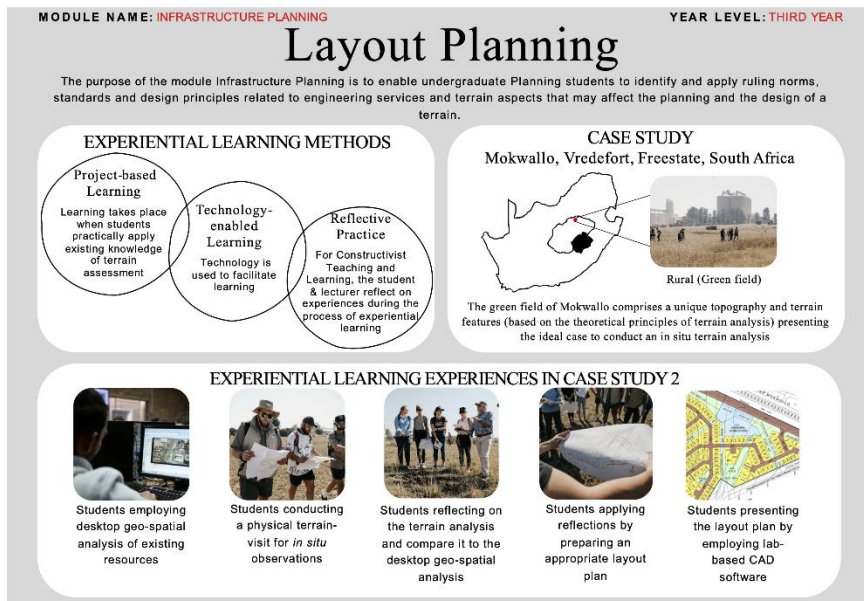


Figure 3: Layout planning

The experience of learning *layout planning* is presented in Figure 3 where dichotomous experiential learning was applied for students to experience the role of both digital tools (technology-enabled learning) and a physical terrain visit (project-based learning). The ruling norms, standards, and design principles related to engineering services and terrain aspects were theoretically taught, after which students explored these within the case of Vredefort.



Figure 4: Land use management

Figure 4 presents the case of students experiencing the formal working environment (work-integrated learning) to broaden their understanding of, and actualise the legal principles of *land use management*. The students firstly learnt the theoretical component of land use management and then attended, in groups of six, a week-long visit to a professional planning practice in Brits.

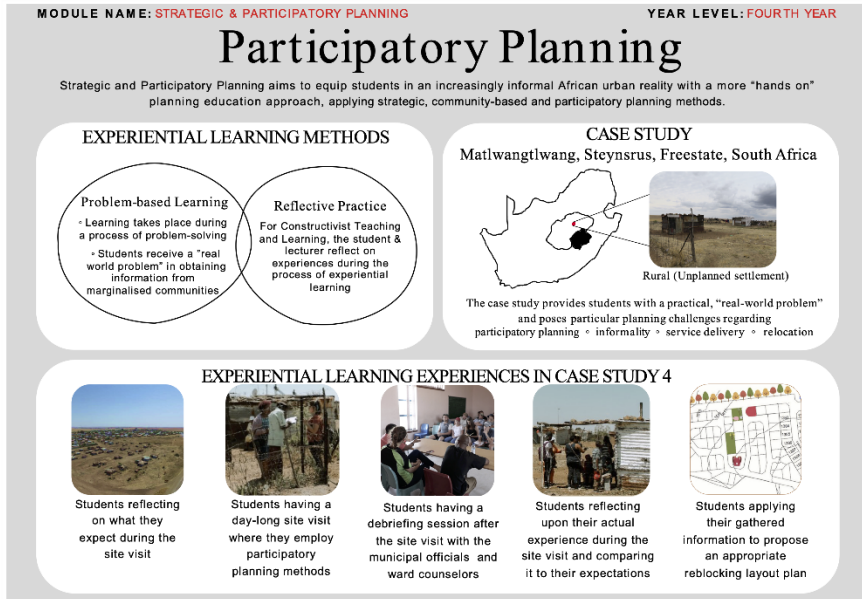


Figure 5: Participatory planning

In learning *participatory planning*, refer to Figure 5, students obtained a theoretical framework of community-based and participatory planning, reflected on their stance regarding this theory, and then practically experienced the implementation of participatory planning methods during a day-long site visit to Steynsrus.

Furthermore, in each of these cases, students were expected to reflect on their learning experience to ensure conscious learning and an integration of their theoretical knowledge and practical experience.

As alluded to earlier, these case studies were collaboratively reflected upon from the lecturers' experience of presenting these modules and based on the feedback from the students, in the respective ways in which feedback was provided about their experiences of the experiential learning in the different modules. This collaborative reflection process (refer to Table 1) was conducted during a lecturer's retreat in August 2021, subsequent to applying

the experiential learning in the modules from 2018 to 2020. The findings generated from the collaborative reflections are presented in the following section.

Discussion of the findings

Findings, resulting from the collaborative reflection on experiential learning applied in spatial planning education as presented in the sections, may essentially be congregated into four main themes; (i) the value for students, i.e. student development, (ii) the value for lecturers, i.e. lecturer development, (iii) the implications for curriculum development, and (iv) implications for spatial planning practice. These themes eventually culminate in recommendations for curriculum transformation and for the planning practice, correspondingly discussed in the ensuing section.

Student development

Reflections based on feedback received from the students in the various modules as outlined in Figures 2 – 5, revealed that the application of experiential learning in all of the case studies, may have resulted in student development on two levels: i) Planning discipline related knowledge and insight, and ii) Soft skills development.

Planning discipline related knowledge and insight

- **Linking Theory and Practice:** Problem-based, project-based, and work-based learning made planning theory relevant, practically applicable, and relatable to students.
- **Professional experience:** Employing experiential / work-based learning provided students, as candidate planners, with the required work-based experience and the necessary practice exposure prior to professional registration.

- **Interdisciplinary understanding:** Exposing students to an interdisciplinary work environment through the application of experiential learning, has opened their eyes to the challenges in practice of working in a project team composed of professionals from diverse disciplines and has provided them with an improved understanding of how these disciplines are related.
- **Broadened perspective:** The exposure of students to the entire planning process through work-based, problem-based and technology-enabled learning, has not only broadened their perspective on spatial planning practice, but assisted them in their selection of themes for their final-year research projects.
- **Context-based learning:** Introducing students through experiential learning to a variety of diverse case studies, has cultivated in them an understanding of the unique and varying contexts in which they will work and that each context requires tailor-made solutions.
- **Negotiation skills:** Students learned invaluable community engagement- and negotiation skills as they have been actively part of negotiations with municipalities, ward councillors, and community members as students indeed conducted post-survey meetings with both municipal officials, ward councillors and selected community members in disseminating collected data with these city actors.

Soft skills development

- **Critical thinking:** Continuous application of reflective practice as an integral part of all the experiential learning case studies, has dramatically enhanced the students' critical thinking skills as they had to continuously evaluate their own learning and thinking processes through written reflections.
- **Problem-solving:** Problem-based learning and reflective practice have enabled students to develop problem-solving skills,

continuously elevating their level of reasoning, whilst simultaneously linking theory and practice.

- **Cultural sensitivity and social responsibility:** During the community engagement processes and a variety of site visits, students had to adapt and learn the necessary values, attitudes, knowledge and skills required by new, young planning professionals, sensitising them towards the cultural diversity in various South African contexts and their social responsibility towards the communities in which they work.
- **Project management:** The employment of project-based learning, where the case studies have been structured as simulated urban planning projects, enabled students to develop soft skills in project management as students had to work in project management groups / teams with a professional focus and company name, as they would in practice.
- **Communication:** Students have developed robust interpersonal communication skills in the application of experiential learning, as they were constantly confronted with different role-players from diverse groups in practice and had to make adjustments in their communication accordingly e.g. to avoid 'technical jargon' whilst communicating with community members.
- **Conflict management:** Working in groups has had the added bonus of students learning relevant remedies in handling and resolving typical conflicts to the benefit of the entire project team.

Lecturer development

Collaborative reflection during the reflective lecturers' retreat, has revealed that the application of experiential learning also resulted in the development

of the respective lecturers on two levels: i) Planning discipline related knowledge and insight, and ii) Soft skills development.

Planning discipline related knowledge and insight

- **Broadened theoretical knowledge:** The application of experiential learning necessitated constant renewal of the study material in the respective case studies and has consistently compelled the lecturers to identify gaps in their own theoretical knowledge e.g. participatory planning theory. In some cases, the students have also contributed new sources to the existing study material that supported lecturers in broadening their theoretical knowledge e.g. articles on participatory planning.
- **Work-Integrated Learning (WIL):** Renewed and continuous exposure to planning practice through work-integrated learning, has resulted in the transfer of more current and applicable knowledge as well as the constant improvement of lecturers' insight into practice matters due to input received from practitioners and students, e.g. students completing a brief elective in a consultant practice.
- **Research outputs:** Employing experiential learning through the Scholarship of Teaching and Learning (SoTL) projects by the various lecturers, has provided an essential connection between research, education and community involvement, narrowing the gap between teaching, learning, research, and practice. This has provided lecturers with the opportunity to produce relevant research outputs (e.g. journal articles, book chapters, best case practices, etc.) through teaching and learning, converging the energy that lecturers usually have to devote separately into both aspects.
- **Relevance and social responsibility:** Continuous involvement in planning practice and in community engagement through experiential learning, has supported lecturers in the effort to remain

relevant in the transfer of knowledge and has created an awareness of the reality wherein spatial planning practice functions. It has also provided lecturers with the opportunity to stay involved in their neighbouring communities and sensitised them to their continuous social responsibility towards the public.

- **Indigenous student knowledge:** The practice of experiential learning has indicated latent potential towards enhancing teaching and learning methods, continuously learning from the students' experiences and co-producing solutions with their knowledge and inputs, to improve current education methods.

Soft skills development

- **Creative and critical thinking:** The application of continuous individual critical reflection by lecturers on the employment of experiential learning, has resulted in the development of new creative solutions and personal skills development in the transfer of knowledge.
- **Problem-solving:** Problem-based learning and reflective practice have also enabled lecturers to develop problem-solving skills, especially concerning the application of novel methods in the transfer of knowledge and in developing the most suitable assessments of module outcomes.
- **Teamwork and communication:** The shared paradigm of cognitive and social constructivism, as well as the collaborative reflection on experiential learning between lecturers in the subject group, have conducted improved teamwork and communication amongst lecturers. It has also resulted in the co-production of new knowledge and workable methods in teaching and learning, and consequently, the development of the curriculum.

Implications for Curriculum development

The dualistic development of students and lecturers through the application of experiential learning, has inevitably led to implications for curriculum development, subsequently discussed:

- **Linking research, teaching and learning, and practice:** Employing experiential learning through the Scholarship of Teaching and Learning (SoTL) projects by the various lecturers, directly resulted in narrowing the gap between research, teaching and learning, and practice. Applying work-integrated learning in bridging this divide, is also a requirement of SACPLAN (the South African Council for Planners) and, therefore, has contributed towards their accrediting the NWU Urban and Regional Planning curriculum by the appointed SACPLAN accreditation board during 2021.
- **Module adjustments across year levels:** Continuous application of experiential learning across different year levels as indicated in the respective case studies, has culminated in the renewal of existing modules and the creation of new relevant modules (e.g Participatory planning module, Planning practice, Layout planning site analysis, etc.). This instigated an improved liaison between modules on the various year levels and the holistic development of the planning curriculum as it is prescribed in the core competencies and standards for curriculum development by SACPLAN.
- **Social constructivism and reflective practice:** The collective paradigm of social constructivism and the continuous application of reflective practice by lecturers in the subject group, have resulted in the co-production of new knowledge and workable methods in teaching and learning, and consequently, the development of the curriculum.

- **Application of novel technologies:** As a function of the application of technology-enabled learning, students have received training in the use and application of the latest technologies and methods in Planning (e.g. drone technology), subsequently keeping the planning curriculum and the education of students relevant, whilst keeping pace with the latest technology available.
- **Adapted assessment methods:** The application of new teaching and learning methods in experiential learning has correspondingly compelled the development of new, relevant and suitable assessment methods. These include, for example, portfolio evaluation, day-long (8 hour) practical examinations, case-study based assessment questions and the inclusion of written critical reflections as part of assessment procedures.

Implications for practice

It is axiomatic that improved education of students and the development of the spatial planning curriculum through the application of experiential learning would, evidently, result in positive implications for the planning practice. The most significant implications may be summarised as follows:

- **Professional qualification and Continuous Professional Development (CPD):** The unique nature of the degree as a professional qualification in Urban Planning as well as the core competencies and standards for curriculum development required by SACPLAN, has necessitated the application of experiential learning. Further to this, the CPD requirements of SACPLAN, to which practitioners must adhere, have created the ideal vehicle for a continued link with practice and, subsequently, the application of

experiential learning. It also provides a sustainable platform for the future implementation of similar case studies.

- **Linking Theory and Practice:** Enhanced interaction with planning practitioners through experiential learning, has resulted in an increasing transfer of knowledge from theory to practice and vice versa through feedback received from planning practitioners during work-integrated learning electives and student elective reports. In this way, practitioners gain exposure to the latest planning literature and research methods that they may decide to use in drafting applications and policies. This cross-pollination thus bridges the current gap between theory and practice.
- **Improved networking and collaboration:** The employment of experiential learning necessitates continuous feedback to municipalities, political role players and planning practitioners, having the positive consequence that it significantly expands the current network of the university and promotes collaboration with key role-players.
- **Creating awareness about the Planning Profession:** Improved networking and collaboration have the added advantage that these create awareness about the planning profession amongst important role-players and subsequently could contribute towards the safeguarding of the profession.
- **Well-rounded planning students:** Continuous practice exposure of students in planning through experiential learning, perceivably contributed towards better adjusted and well-rounded candidate planners, more aptly prepared for the working environment.

Discussion

South African spatial planning schools have inherited a planning paradigm and educational framework based on colonial practices from the previous century. Being a unique region, South Africa reflects a noteworthy formal, developed character, while maintaining informalities parallel to the formal character. The spatial planning curriculum in general also reflects on this through a biased application of a disparate spatial planning approach. Although some form of experiential learning has been applied in numerous spatial planning curricula, the educational emphasis was mostly on behaviourism and cognitivism. This chapter has set out to analyse the role and application of experiential learning practices within the cognitive and social constructivism paradigm in an existing and accredited spatial planning higher education programme. Four unique 'live' case studies, based on the content of existing learning modules, have been facilitated and implemented over a period of three years with different year groups. The students had to reflect on their experiences afterwards in an effort to support conscious learning and provide feedback to the lecturers. The response and findings of the said case studies have subsequently been synthesised by means of a collaborative reflection workshop by the relevant lecturers.

It was clear from the reflective collaborative retreat that knowledge was certainly constructed during these 'live' case studies by the students while interacting with a variety of spatial- and socio-cultural environments. The findings of the above case studies and research exercises were related back to student-, lecturer- and curriculum development implications, as well as inferences on the practice of implementing spatial planning. The results reflect that the experiential learning exercises possibly provided the students with an improved vision of the link between theory and practice, as well as a better understanding of spatial context. Their soft skills may well have

improved with the application of problem-solving and critical-thinking encounters, as well as a possible improved awareness of cultural sensitivity and social responsibility, amongst others were gained.

The students were not the only beneficiaries of said experiential learning exercises. Increased exposure to spatial planning practice has improved the lecturers' awareness of insight and knowledge in their respective fields, while increased social responsibility and a more acute awareness of relevant spatial contexts have been emphasised. The lecturers' collaborative efforts have also resulted in teamwork that is more productive and have led to increased research outputs. The latter research outputs have not been the only formal results or implications, as the above findings were also articulated into the curriculum through improved module content adjustments across the four-year programme. The chronology of case studies is now in support of one another, while new technologies and adapted assessment methods have formally been implemented.

The benefits of the above experiential learning exercises also reflect on the implementation of planning practice. In South Africa, registered practitioners are expected to further their professional development initiatives annually – the above interaction with students and a higher education institution is recognised, and supports this platform. There is also increased networking between these two sectors, as well as an increased awareness of the planning profession in general. In summary, it is evident from the findings above that the approach followed through these 'live' case studies has returned exceptional results in terms of the scientific discipline. Not only has the curriculum been transformed, but the above experiential learning initiatives may well have resulted in lecturers that are better equipped and students that enter the job market as more well-rounded professionals. This is due mainly as a result of exposure to real-life situations and a scope of knowledge

and skills that have expanded according to the reflections of students, taking into consideration the lecturer's collaborative reflections. However, the success of these perceived practical benefits needs to be assessed in follow-up research.

Recommendations

Although recommending exhaustively on experiential learning as applied in the respective case studies is formidable, and further publications should be anticipated, this chapter concludes by offering recommendations deemed essential to meet the main argument of this chapter (outlined in the introduction). The recommendations are presented under three themes in accordance with the findings of the preceding section i.e., student development, lecturer development, and recommendations for curriculum transformation.

Student development

- **Earlier introduction of experiential learning:** While the notion is seemingly and often prevalent to introduce students to experiential learning at more advanced year levels of the spatial planning curriculum, this chapter argues for a much earlier advent, especially as the curriculum has at its crux the delivery of well-prepared candidate planners to the industry, meeting the core competencies of the professional body.
- **Liaison between modules and year levels through experiential learning case studies:** Mere incorporation of experiential learning in the spatial planning curriculum should preferably not be the aim, but rather the selection of specific and applicable real-world (Thorne, 2016:14,27) case studies, over a broad spectrum, thereby also

recommending trans-module and cross-year level experiences, instead of ring-fencing learning experiences per module or year level.

- **Improve research relevancy and practical application:** It is recommended that the students are encouraged to select research themes based on experiential and work-integrated learning activities, strengthening these activities as inherent to the spatial planning curriculum. This recommendation appreciates Farthing's (2016:182) lamentation that too much spatial planning research fails to meet the needs of practitioners and should provide evidence to policy and practice.
- **Context-specific induction and cultural sensitisation:** Operating in the unique spatial planning landscape requires a certain level of sensitisation of students depending on the context of the specific endeavoured case study. Thorough induction and awareness relating to target groups (where community involvement is perceived in a case study) are strongly recommended prior to the undertaking of experiential learning exercises. Induction in this instance ought to be context-specific, relating to the diversity of the South African society.
- **Multidisciplinary attitudes and comprehension of the entire spatial planning process:** Working in the multidisciplinary environment is intrinsic to the dynamic planning landscape, involving specialists over an exceedingly broad spectrum. Work-integrated learning may well offer pertinent opportunities to expose students to the multidisciplinary environment and the selection of real-world case studies should purposefully explore this reality. Work-integrated learning is additionally recommended to expose students to the 'entire planning process', inclining from the planner in isolation towards the planner as an important link in the kaleidoscope of the entire planning process.

- **Reflective practice as a tool for developing critical thinking:** The employment of reflective practice (i) prior to and (ii) following a selected case study by students, is perceived as an essential and inherent practice and (iii) its further inclusion as part of the assessment processes, is recommended for all experiential and work-based learning-activities. The enhancing value thereof towards the own learning, development of critical thinking skills, and thinking processes amongst students, should not be underestimated, reinforcing its inclusion as an indispensable component of learning experiences.

Lecturer development

- **Dissemination of knowledge on innovative educational methods:** Exposure to the dynamics of experiential learning has induced renewal of the learning curves of lecturers. It is, therefore, recommended that lecturers proactively make use of already existing support structures e.g., the Centre for Teaching and Learning (CTL) and the Scholarship of Teaching and Learning (SoTL) to encourage exposure to new and innovative teaching methods, that they may not currently be familiar with. Recommendations towards experiencing new and innovative methods, appropriate for the diversity in the South African society, are ardently endorsed.
- **Social constructivism as a tool for creating new knowledge:** In sustaining continual upward learning curves, the co-construction of knowledge is strongly advocated. It is recommended that the contributions of both students (based on their reflections) and the involvement of planners in the industry (comprehending and applying workable solutions and community involvement) are permitted as it

is, in addition, deemed conducive to the entire planning and education process.

- **Collaborative reflection as a tool for the development of planning education methods:** Promoted reflective practices in the preceding section, are similarly recommended amongst lecturers in so far as their lessons learned, best case practices, and proposed improvements on experiential learning, and other educational methods are concerned. In this regard, the mutual sharing of experiences arising from experiential learning on a regular basis, is also recommended and is regarded as underwriting a continuously improving planning curriculum.
- **Integrating research outputs and teaching and learning:** Research outputs amongst lecturing, often burden lecturers and these activities are also viewed as separate outputs, irrespective of their extreme distinct time appetites. It is recommended that experiential learning during SoTL projects may well, through its integrating attributes between teaching, learning, research, and practice attributes, offer inimitable research opportunities resulting from teaching and learning, as opposed to considering the entities unrelated to each other.

Recommendations for curriculum transformation

- **Incorporation of experiential learning in the spatial planning curriculum:** The selected case studies, findings and recommendations in the preceding sections accentuate the benefits of incorporating experiential learning in the spatial planning curriculum. It is recommended that the knowledge accumulated through the conducted case studies are purposefully employed in:
 - Adapting relevant modules,

- Preparing new modules,
 - Considering alignment between modules,
 - Investigating hybrid modules with correlating disciplines,
 - Improving fluid teaching by the confluence of more than one lecture in a module or modules,
 - Seeking cross-year alignment.
- **Relinquishing the ring-fenced module approach:** Most significantly, a combination of experiential learning approaches traversing year levels and modules are the preferred recommended response to anticipated curriculum transformation, especially as megatrends emphasise the need for disembarking from the pursuit of a predictable single future or outcome (Retief et al., 2016:56). The broad and multidisciplinary nature and encounters confronting planners in the 'real' planning environment are simply unable to longer afford a ring-fenced or silo module approach, as is often the case in spatial planning higher education in South Africa.
 - **Experiential learning and real-world case studies in planning education:** The students' positive experiences and perceived benefits of experiential learning, as found during the collaborative reflection process, were applied through the use of the case studies discussed in this chapter, have emphasised the relevance and diversity of experiential learning in planning education. The importance and implementation of diverse context-based methods (e.g., project-based, problem-based, work-based and technology-enabled learning) of experiential learning by lecturers in planning education are, therefore, fervently recommended. This, of course, to ensure the preparation of planners for the industry, keeping pace with real-world and contemporary approaches that are often obtained only through

work-integrated learning activities and resultant 'grey literature' (Bonato, 2018:49).

- **Budgeting for continuous experiential learning:** Although SoTL project funding may still contribute towards research and anticipated revisions in the planning curriculum, sole dependency thereupon may be unsustainable. Departing from a silo approach to an integrative and traversing approach to teaching and learning by, inter alia, intensively pioneering experiential learning, is perceived as cost-intensive to an extent not necessarily predicted in current budgets. Active budgeting and re-budgeting, despite apparent difficulties in a cost-cutting milieu, will be the exciting charge forward.

Conclusion, limitations and the way forward

When compared to a generic programme, it is clear that a professional programme at a Higher Education Institution (HEI) has different outcomes and expectations from the governing professional body, as well as the requirements of professional practitioners who potentially employ them. This presents the Programme Managers with tremendous challenges to meet the requirements of an HEI in terms of programme content and outcomes, as well as preparing the learners for a lengthy practical apprenticeship that follows this four-year training.

This study indicates how extensively and diversely experiential learning may be applied, in different forms and applications, within spatial planning education in order to train students across different year levels and in diverse practice-based contexts. It is evident that our approach and application of experiential learning offer the potential to significantly improve the link between theory and practice, and that its sustained application may fundamentally contribute to the development of spatial planning education

at an HEI, as well as planning practice. One limitation of the research presented in this chapter where lecturers have reflected on the value of experiential learning in their teaching of spatial planning, is that although students did provide feedback (whether in the form of critical reflections or questionnaires), it is difficult to report thereon in this chapter format. Also, the value of student development that emerged from this study has not yet been evaluated in terms of students' performance in the workplace. This type of member-checking with former students, who are now employed as spatial planners, would add significant value to this study. Accordingly, the medium to long-term effectiveness and impact of experiential learning that are reflected upon in this chapter, and how these 'live' case studies have changed students who are now alumni, should form the focus of future research initiatives.

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CHAPTER 8:

Problem-Based Learning: Priming pre-service consumer studies teachers for practical lessons

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Abstract

Teaching Consumer Studies is often complicated, particularly in practical lessons which contribute significant formal learning, but which requires the management of countless problems to ensure that learners benefit optimally. Preparation of preservice Consumer Studies teachers should, therefore, include insight into the problems experienced in real-world practical classes. In addition, teacher students should be equipped with the 21st-century skills they will need to deal with such challenges. These issues were imperative for inclusion in a recently-developed module for preservice Consumer Studies teachers, to bridge the gap – utilizing problem-based learning – between the teacher preparation program and the real-world challenges teachers face in South African classrooms. A mixed methods research design explored if and to what extent problem-based learning developed the 21st-century skills that are needed to prepare Consumer Studies teachers for real-world practical classrooms. Pre- and post-module questionnaires and classroom observations were inductively analysed. The findings showed that most students believed that the module greatly improved or developed several of their 21st-century skills and that the problem-based strategy was perceived as useful. A similar problem-based approach is recommended for subsequent Consumer Studies teacher preparation modules, particularly to develop students' 21st-century skills and to prepare them for the real-world challenges they might encounter.

Keywords: 21st-century skills; Consumer Studies; practical lessons; preservice teachers; problem-based learning

Introduction and background

“Teaching Consumer Studies is not for sissies” — an outcry often heard in South Africa. Consumer Studies shares many characteristics of the subjects Home Economics and Family and Consumer Sciences. Despite Consumer Studies sometimes being viewed as undemanding or simple by people outside the profession, several studies confirm that this elective subject in the South African high school curriculum is complex from both learners’ and teachers’ perspectives (Ngwenya & Shange, 2019; Umalusi, 2014). It is complex because of its broad and diverse theory topics – ranging from food and nutrition to housing, clothing and entrepreneurship (Department of Basic Education [DBE], 2011; Umalusi, 2014) – and because of its significant and demanding practical component (Ngwenya & Shange, 2019). Planning, organizing and managing practical lessons, including administrative tasks surrounding the construction and implementation of effective practical learning experiences, require that these teachers have to be well prepared with apposite knowledge, skills and capabilities.

The practical component includes knowledge and skills which learners apply to produce a physical product and constitutes 37,5% of the total teaching time allocated to Consumer Studies in the curriculum (Umalusi, 2014). Schools may choose one of five Consumer Studies practical production options in line with the resources available at the school, namely food, clothing, soft furnishings, knitting and crocheting, or patchwork quilting by hand (DBE, 2011), however, more than 90% choose to offer food production (Du Toit, 2018). Practical lessons are formally assessed with the aim of preparing learners for “small-scale production, entrepreneurship and

marketing of quality products” (DBE, 2011, p. 8). Therefore, the value of these practical lessons lies not only in skills development but also in developing entrepreneurship education, which is much needed in South Africa where youth unemployment is persistently high.

Nonetheless, the intended entrepreneurial benefits of practical lessons do not always reach learners because “the subject is plagued with challenges” (Ngwenya & Shange, 2019, p. 2). Challenges include insufficient infrastructure (Ngwenya & Shange, 2019); crowded classrooms (Du Toit, 2018; Inn, 2017); limited teaching time (Inn, 2017), or lack of resources (Du Toit, 2018; Inn, 2017). However, the challenge most often mentioned is inadequate training of teachers (Du Toit, 2018; Inn, 2017; Koekemoer & Booyse, 2013; Umalusi, 2014). Teacher education is often viewed as ineffective, in particular due to the gap between theory and practice. Teachers who have inadequate training for a complex subject such as Consumer Studies and who are then faced with additional real-world challenges, such as those mentioned above, will have a difficult time to effectively implement the subject, which will be to the detriment of their learners (Koekemoer & Booyse, 2013). Similar challenges are reported for Home Economics in several other countries such as Estonia (Paas & Palojoki, 2019), Finland (Niskanen, 2018), Mauritius (Pace et al., 2015), Nigeria (Uzoka & Okafor, 2010) and Papua New Guinea (Limu & Kikising, 2015), highlighting the need to explore strategies to also address these difficulties internationally. A teacher preparation module (coded VWVD 521) was viewed as a good starting point and potential vehicle to introduce strategies to help preservice Consumer Studies teachers to better grasp and manage these and similar challenges that they might face in real-world classrooms. The problem was that a module needed to be developed which would not only prepare preservice teachers for teaching a complex subject but also for the additional challenges they may face in practical lessons.

The purpose of this chapter is to report on the research that was conducted to develop a module to optimally prepare preservice Consumer Studies teachers for practical lessons by bridging the gap between their student preparation and the real world. This chapter is structured as follows: the conceptual-theoretical framework describes the pertinent concepts relevant to the research and their relation to each other; thereafter, the research methods are unpacked, followed by a discussion of the findings. Finally, based on the findings, conclusions and recommendations are made.

Conceptual-theoretical framework

Some of the 21st-century skills which Consumer Studies teachers will need in practice to cope with the challenges of teaching this subject in South African classrooms, are described below. The potential of utilizing action research, and in particular problem-based learning, to develop the required 21st-century skills in preservice teachers is then discussed. The section lastly considers the theory of social constructivism and how it brings together the aforementioned concepts.

21st century skills needed to effectively construct and implement practical lessons

The Glossary of Education Reform (GER) (2016) describes 21st-century skills as “a broad set of knowledge, skills, work habits, and character traits”, explaining that the term refers to more than just skills. This set of skills and competencies is critically important for success in the modern world, as part of education, and also in preparation for the world of work (GER, 2016). Similar skill sets are sometimes referred to using other labels, such as “essential skills” (Van Beek et al., 2014), “survival skills” (Wagner, 2014), or “soft skills” (World Economic Forum [WEF], 2018). In this paper, the term

“21st-century skills” continues to mean the broad set of skills and traits described by the GER above.

Several particular skills and traits are repeatedly designated as 21st-century skills in literature – for example, critical thinking; problem-solving; creativity; communication; planning skills; time management; collaboration; initiative-taking; self-direction in learning; teamwork and metacognition (DBE, 2011; GER, 2016; Savery, 2015; Umalusi, 2014; Van Beek et al., 2014), to name but a few. The current investigation centered on the set of 21st-century skills defined by Hixson et al. (2012, p. 8), as their set of skills aligns prominently with the skills needed by Consumer Studies teachers and are also beneficial for entrepreneurship education. Their 21st-century skillset includes: critical thinking skills; collaboration skills; communication skills; creativity and innovation skills; self-direction skills; global connections; local connections; and using technology as a tool for learning (Hixson et al., 2012).

Developing 21st-century skills as part of Consumer Studies education is essential. Consumer Studies teachers need these skills to manage demanding theory lessons and, to a greater extent, to support them in planning and presenting effective practical lessons. Wood and Nahmias (2005, p. 80) describe the skills that preservice teachers need to develop as “classroom skills”, which answers students’ questions on “how to” address various issues in their classrooms. Skills are needed to support teachers in time management; planning and managing resources; thinking critically and creatively about the saleability of learners’ products; organizing and managing collaboration between learners; solving various real-world problems before and during the practical session; and lifelong or self-directed learning as part of their continued self-development in the profession. Teachers, therefore, should develop these skills to support and enhance their teaching in the subject to keep up with the rapid changes and development

in the 21st century (Shapiro, 2017; WEF, 2018) and to enable them to develop similar skills in their learners. Hixson et al. (2012) determined that teachers whose training included 21st-century skills taught such 21st-century skills more often and more extensively than other teachers. It is also vital to prepare preservice teachers for the challenges they might face in their profession in the real world one day (McGlynn-Stewart, 2010; Shapiro, 2017). Learning that is linked to the real world will help to prepare preservice teachers for challenges and improve students' engagement in their learning, motivating students in the process (Bouw et al., 2019).

Problem-based learning is a strategy that has been employed as part of action research in preparing South African teachers with 21st-century skills in other subjects, such as computer programming (Havenga, 2016), and geography education (Raath & Golightly, 2017). Research on its use to prepare preservice teachers for Consumer Studies is, however, rare.

Problem-Based Learning

Problem-Based Learning (PBL) is an active and interconnected process of socially constructed learning (Davidson-Shivers et al., 2018). Although descriptions and definitions for problem-based learning abound, most of these include similar characteristics, which are used to design and implement problem-based learning (Shinde, 2014). Therefore, rather than offering a single comprehensive definition, the characteristics of problem-based teaching-learning strategies are elucidated here.

The core characteristic of problem-based learning is that it is a structured and active learning process based on investigating or resolving problems or complex issues (Koehler et al., 2019; Raath & Golightly, 2017). The process is student-centered and learning-focused, thus, the lecturer serves as facilitator of the process rather than a "teacher" (Savery, 2015). Students are given

more autonomy in the learning process than in traditional teacher-led classes and work self-directedly, as well as in small groups, to address or solve problems (Bouw et al., 2019; Shinde, 2014; Van Beek et al., 2014). The guiding problem(s) should be based on real-world situations and be open-ended or ill-structured (Havenga, 2016; Larmer, 2015) to make learning more meaningful for students (Van Beek et al., 2014).

Students analyse and determine what the core of the problem is; what they already know that might be relevant to solving the problem (prior knowledge); and what additional or new knowledge or skills they will have to develop to address or solve the problem (formulating learning goals). Students utilise self-directed learning as well as facilitated learning to address the learning goals they set (Larmer, 2015; Savery, 2015; Shinde, 2014). Sharing of developing knowledge and potential solutions for the problem is another indispensable characteristic of problem-based learning (Larmer, 2015; Van Beek et al., 2014), providing valuable constructivist learning opportunities. Problem-based learning strategies must be judiciously planned and structured to include all these characteristics together with developing the intended knowledge and skills in a learning program, and should integrate the development of 21st-century skills in students (Shapiro, 2017). In this way, problem-based learning could bridge the gap between education and the world of work, such as the gap between preservice teacher preparation and the skills Consumer Studies teachers will need to teach the subject in practice effectively.

Social constructivism

Topolovčan and Matijević (2017) define constructivist learning as a non-linear, self-directed and interpretive process of knowledge construction, which is informed and influenced by the learning environment. Constructivist

learning utilises authentic activities and contexts that echo how knowledge will be used in the real world, supports collaborative knowledge construction, and provides opportunities for dialogue and reflection. This allows for multiple perspectives to emerge as part of the dialogue and requires that different roles are fulfilled by the students as well as the facilitator (Herrington et al., 2007; Topolovčan & Matijević, 2017). Such different perspectives – and broader knowledge – are developed when learners and teachers exchange ideas, explain problems from their individual and collective perspectives, and then construct meaning from the process (Gordon, 2008; Wood & Nahmias, 2005).

Knowledge is therefore constructed, rather than discovered or received (Gordon, 2008). If the co-construction of learning is intended, the process has to be structured with particular emphasis on the actions of learners – both as individuals and as part of the group – as well as those of the facilitator (Davidson-Shivers et al., 2018). Rather than fulfilling a traditional role as the “giver of knowledge”, the facilitator (or lecturer) serves as one of the co-constructors of knowledge. Students are placed at the center of the learning process and become actively involved in the co-construction of knowledge (rather than just “receiving knowledge”). Each student contributes individual or shared prior knowledge, experiences or perceptions to the overall knowledge of the group, thereby creating multiple perspectives that expand the learning experience for every member of the group (Davidson-Shivers et al., 2018; Topolovčan & Matijević, 2017), which often challenges students to consider alternative views (Beckers et al., 2015). The social and interactive nature of such co-construction of knowledge is referred to as social constructivism (Davidson-Shivers et al., 2018). Rather than the traditional competitive approach to learning, collaboration and social interaction between students are emphasised in this type of learning (Beckers et al., 2015).

Social constructivist learning includes several of the features or characteristics inherent to problem-based learning, such as active learning in authentic contexts, student-centeredness, and altered roles of learners and facilitators. Problem-based learning is often directly associated with social constructivist learning (Beckers et al., 2015; Davidson-Shivers et al., 2018; Gordon, 2008; Topolovčan & Matijević, 2017). Despite Gordon's (2008) concern that constructivist learning might result in diminished connectedness to individuals, current research supports the view that social constructivist learning also relies heavily on some of the 21st-century skills mentioned earlier, such as collaboration and teamwork, but also including self-direction in learning. Since preservice teachers' experiences are often limited to their own prior encounters, collaboration will contribute to providing opportunities for broadening their perspectives and collaborative knowledge (Koehler et al., 2019). Developing and fostering these skills will, therefore, contribute to social constructivist learning reciprocally. These parallels substantiate the suitability of framing this research in the socio-constructivist theory.

Action research aspires to transform the manner in which people understand things, apply knowledge in practice or the conditions in which they function (Kemmis, 2009) and therefore can contribute to understand how knowledge and practices are constructed.

Research methods

The current study aimed to address the problem of developing a Consumer Studies teacher preparation module which would not only equip students with didactical knowledge but also prepare them for the challenges they might face in real-world practical classrooms. In other words, the construction of learning in this module had to be planned to foster the

development of particular 21st-century skills that preservice teachers would need in their real-world professions someday. Therefore, the main research question for this investigation was: How can the requisite 21st-century skills for practical lessons be developed in a Consumer Studies teacher-preparation program using problem-based learning?

Three sub-questions were used to structure and guide the investigation:

- How can a preservice Consumer Studies teacher-preparation module be scaffolded to contribute to authentic learning?
- What are students' perceptions of the use of problem-based learning as part of their preparation as teachers?
- To what extent can problem-based learning contribute to the development of 21st-century skills in a preservice Consumer Studies teacher-preparation program?

An exploratory mixed method research design was used to investigate the teaching-learning strategies used in a new preservice Consumer Studies teacher-preparation module as well as how students in this module perceived the strategies used to prepare them for their future teaching careers. The design was QAUL-quan, with the quantitative results supporting the broader qualitative findings.

The lecturer for the module as well as all students registered for this module in 2019 (n=5) contributed to the data. The students were viewed as the "others" in the action research, and therefore were not viewed as objects, but also had a voice, in line with the reciprocal relationship described by Kemmis (2009). All the students in the module were invited to complete an online pre-module survey in order to determine which types of learning strategies and 21st-century skills they expected to need to enable them to present effective Consumer Studies practical lessons. The initial survey used

rating scale (Likert type) questions, as well as open-ended questions to explore aspects such as students' prior experiences of problem-based or other teaching-learning strategies; their views on the importance of practical lessons; and which 21st-century skills they believed they would need to enable them to conduct practical lessons effectively as Consumer Studies teachers – before the commencement of their teacher training program.

Several traditional teaching-learning strategies were then used in the module, but a substantial part thereof was presented following the seven steps of the problem-based learning approach suggested by Schultz and Christensen (2004). At the conclusion of the module, the students were again invited to complete a post-module survey, also consisting of a combination of rating-scale and open-ended questions. The purpose of this second survey was to collect data about what the preservice teachers believed they had learned, which 21st-century skills they believed they had developed in the module, as well as their perceptions of the usefulness of problem-based learning as a teaching-learning strategy to prepare preservice teachers for the real-world challenges they might encounter. Van Beek et al. (2014) support the use of student perceptions for data collection as it is relatively easy to obtain, provides an overview of perceptions from the class as a whole, as well as of several lessons with the same teacher. The students were also required to anonymously write reflective notes on their experiences of the learning content and - strategies used in the module.

The qualitative data were analysed iteratively and numerical data from the rating scales used in both surveys were analysed quantitatively: to support the reporting of the qualitative data and to enable graphic representation of the findings. Diverging stacked bar charts were used for these charts, as recommended by Heiberger and Robbins (2014) for the plotting of results from rating scales to compare attitudes from respondents. Issues related to

“21st-century skills” and “problem-based learning” were identified as a priori codes before the analysis. In addition, a posteriori codes that emerged from the data – for example, entrepreneurship, apprehension about the future, and inclusivity of learners, were used. The codes were refined and categorized to enable differentiating of patterns from the combined sets of data. To support trustworthiness, a variety of sources, instruments and methods for collecting data were used; member checking was employed to review the accuracy of the report; and detailed notes were made during observations. In addition, the data from the different collection strategies were triangulated to contribute to the credibility, dependability and confirmability of the research. All ethical requirements stipulated by the ethics committee of the Faculty of Education were adhered to.

Findings and discussion

The findings are presented and discussed under four main themes, namely: the value that preservice students attribute to Consumer Studies practical lessons; their experiences of problem-based learning as a strategy to prepare them for such practical lessons; their preparation with and development of 21st-century skills; and the extent to which this approach contributed to bridging the gap between traditional preservice teacher preparation and real-world practical classrooms.

The value of practical lessons

None of the students in the module had any formal prior preparation for teaching practical lessons in Consumer Studies. Nonetheless, all the students believed that practical lessons were an essential part of the Consumer Studies curriculum and were indispensable for learners’ development in the subject, indicating that these students understood the value and importance of practical lessons in the subject. This is contrary to findings from a study

that explored South African Consumer Studies teachers' implementation of the subject (Du Toit, 2018) which showed that practical lessons are not always valued by all teachers and that several problems (such as lack of money or physical resources) hinder the realisation of this valuable learning in practice. Students' comments in the survey to motivate why they valued practical lessons include references to the contribution of practical lessons to learners' entrepreneurship education, application of theoretical learning in real-world situations and providing opportunities for including all learners in such learning experiences (inclusivity). The following comment by one of the students summarises these sentiments succinctly:

Practicals provide learners with a structured environment in which to build skills and help empower learners with real-life life skills which they can turn into a career. With South Africa's rates of unemployed youth these skills will be valuable for all children and young people....

Therefore, it is hoped that even if these students encounter difficult circumstances in their classes one day, they will persevere with presenting effective practical lessons because they believe in the value such learning holds for their learners. Holding the value of practical lessons in high regard would, however, not be helpful if teachers are not trained in ways that will support effective practical lessons. Hence, the findings on the planning and implementation of problem-based learning as well as how students in the module experienced it, are described and discussed next.

Problem-Based Learning to prepare preservice teachers for practical lessons

In preparation for the module, the lecturer explored available literature to identify a set of problem-based learning steps that would contribute most to the particular preparation requirements of Consumer Studies teachers, to

attempt to meet the action research requirement of practice-changing practice (Kemmis, 2009). That search resulted in the seven-step problem-based learning process described by Schultz and Christensen (2004) being selected for implementation in the teacher preparation module.

It was complicated to select the core problem upon which the problem-based learning in the module would be based. All the students in the module were Caucasian and were accustomed to schools that were highly functional, well-resourced and -managed and funded to support optimal learning. The students therefore had only experienced Consumer Studies practical classrooms that were operated in a similar functional, well-funded manner. Although there are still some well-managed and functional Consumer Studies practical classrooms across South Africa, the reality is that there are many schools where this is not the case. Consumer Studies practical classes are impeded by challenges such as a lack of resources, insufficient funds, crowded classrooms and poor management (Du Toit, 2018; Ngwenya & Shange, 2019), to name but a few. Classroom management is intricately linked to and interwoven with the learning taking place in that environment (Wolff et al., 2015) and is therefore imperative, especially when problems develop or emerge during a lesson. Preservice teachers have to develop practical knowledge and several skills to support effective classroom management and meaningful learning for learners (Wolff et al., 2015).

Uncertainties surrounding teacher placements in permanent departmental posts in South Africa mean that the students could end up teaching in schools very different from those they are accustomed to. Preservice teachers often have inadequate experience of real-world classrooms, which result in them being ill-equipped for problematic classroom situations (Koehler et al., 2019; Wolff et al., 2015). The module, therefore, had to prepare these preservice

teachers to be successful in well-appointed and under-resourced practical classrooms.

As all the students had experience of well-appointed practical classrooms, a decision was made to rather scaffold the problem-based learning in the module around a school where the Consumer Studies practical classroom was under-resourced so as to afford these students additional opportunities for authentic, action-based learning. This decision was based on the recommendation of Savery (2015) that activities used in problem-based learning should also be valued in the real world. To make the process more authentic and to support learning based on real experiences, photographs from a real-world Consumer Studies practical classroom together with a voice recording of an interview with the teacher served as the “problem” around which the learning in the module was scaffolded. The names of the school and teacher were kept confidential, but the photographs and interview were used with permission of the teacher, school principal and provincial Education Department, in keeping with the requirements of the ethics committee of the faculty in which the research was conducted.

Schultz and Christensen’s (2004) seven steps for problem-based learning were followed in the module to facilitate the students’ structured analysis of the problem and investigations into potential ways to address it. An additional eighth step – implementing the suggestions to address the challenges – was added in the module to contribute to the authenticity of the learning experience. In addition, this step allowed students to actively give back something to the community – even if only in a small way – by supporting the development of the practical classroom at the school that was utilised as the core of the investigation, which would, in turn, add value to the learning of learners in that classroom. This was in keeping with suggestions by Bouw et al. (2019) that learning and preparation for work

should be linked to allow active learning opportunities for practical problem-solving which will provide not only theoretical insights but also provide feedback to students once the suggestions for addressing the problem have been implemented (Wood & Nahmias, 2005).

A set of rating-scale questions in the post-module survey asked students to comment on the levels of usefulness they attributed to each of Schultz and Christensen's (2004) seven steps for the problem-based learning strategy as well as the additional eighth step (Figure 1). A four-level scale (-1=not useful at all; 1=useful; 2=advantageous; and 3=extremely useful) was used in an effort to dissuade neutral answers. The students experienced the clarification of the context or setting (step 1) as the least useful part of the problem-based learning strategy. Observations made during that phase of the process indicated that the students would have liked to see the setting (the classroom being analysed) for themselves rather than from photographs or through the eyes of the teacher. The students' request is in line with the statement of Koehler et al. (2019), that students should be enabled to navigate the context of the problem, and that the facilitator should provide support in this regard.

Step 5 – in which students had to formulate their own learning goals – was perceived as second-least useful (Figure 1).

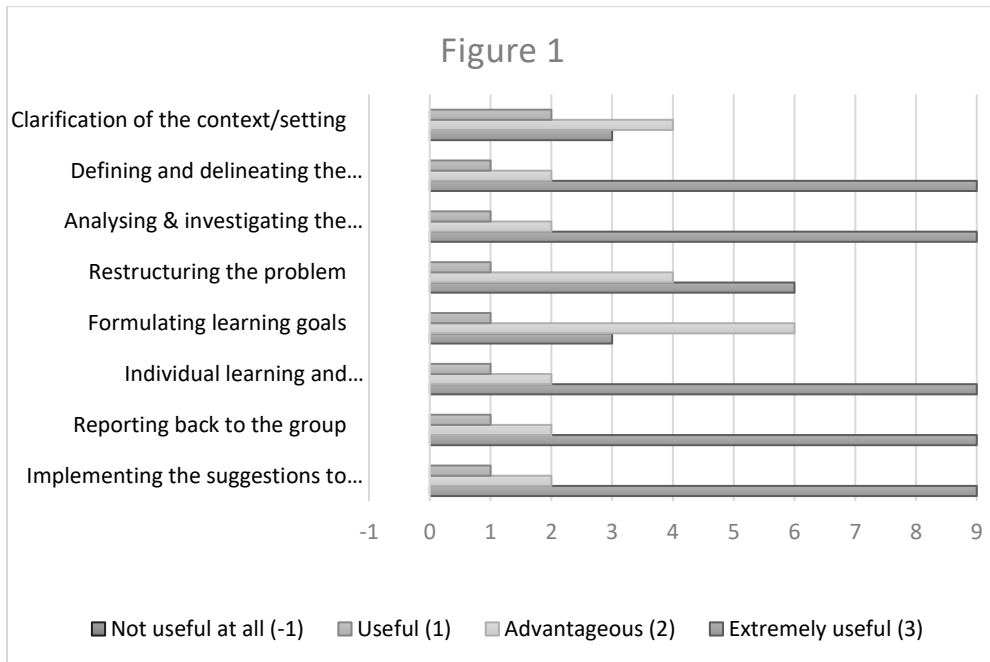


Figure 1: Students' perceptions of the usefulness of the different steps of the Problem-Based Learning strategy

The restructuring of the problem (step 4) was considered to be third-least useful; however, the lecturer noted enthusiastic participation and interesting insights from students during that phase. One explanation for the students perceiving these particular three steps as less useful than the others, is that they had not been taught using a problem-based learning approach before, which is a common challenge in higher education, as reported by McGlynn-Stewart (2010). The students were, therefore, unaccustomed to the value that each of these steps contributes to the learning process.

Another observation made during the restructuring of the problem-step was that the students had some warped expectations of how school teachers actually operate in the real world, that is, within the formal school curriculum and Departmental structures in South Africa. Triangulating data from the students' reflections confirmed the same sentiment when one student noted

that, *“you find that there are really schools where things isn't perfect which is scary”*, and another stated that, *“I thought the practical lessons would be easier and less complicated [than Consumer Studies theory lessons]”*. These comments confirmed that utilizing an authentic and problem-based learning strategy would help to better prepare these students for the real-world challenges they might encounter.

All other steps of the problem-based learning strategy employed in the module, including the eighth implementation of the suggestions step, were experienced by the students as equally useful and more useful than the previously mentioned three steps (steps 1, 4 and 5). Overall, these students experienced most of the steps in problem-based learning as advantageous or even extremely useful, reflecting the positive contribution of that learning to their development as preservice teachers.

Nonetheless, when students were asked to comment on how useful they found the different teaching strategies in the teacher preparation module (Figure 2), micro-lesson preparation and presentation (rather than problem-based learning) were deemed most useful. The same four-level scale (-1=not useful at all; 1=useful; 2=advantageous and 3=extremely useful) was used for this question. Facilitated contact sessions were regarded as second-most useful. The problem-based learning process, formal assignments and informal class discussions with peers were all viewed as equally useful but less so than the two strategies mentioned already.

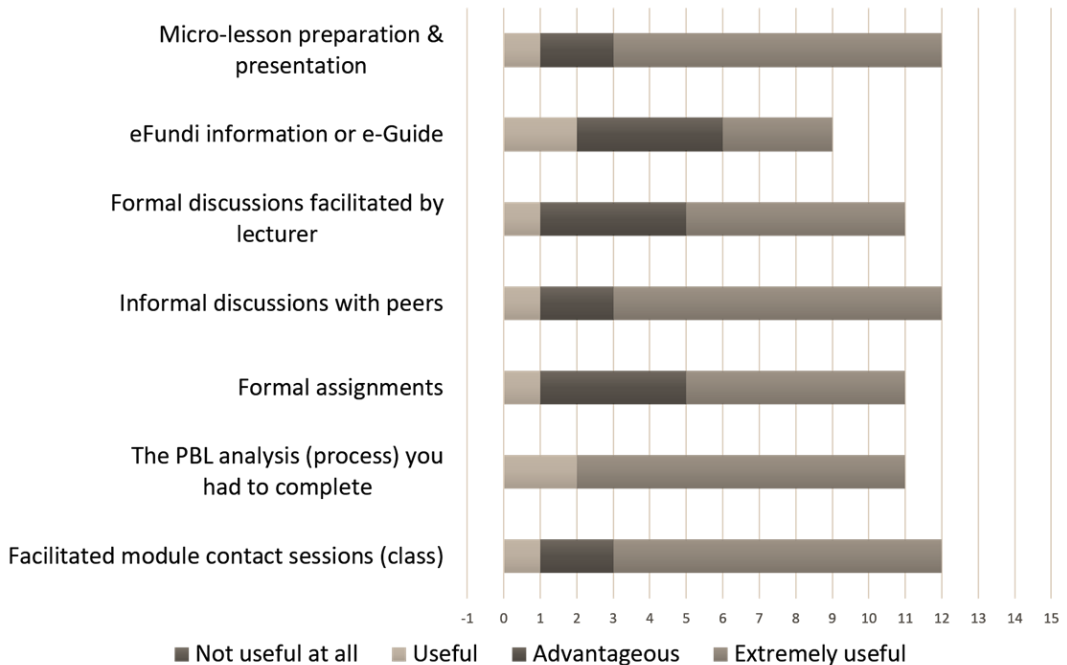


Figure 2: Students’ perceptions of the usefulness of strategies used for teacher preparation

This set of findings (Figure 2) indicates that students revert to what they know and feel comfortable with, that is: the structured and familiar strategies of micro-lessons and facilitated contact (face-to-face class) sessions. This finding is similar to that of Shinde (2014, p. 157), who stated that this type of traditional teaching is a “learning culture that the students are accustomed to”. It would take more than adapting part of a single module to problem-based learning to convince the students of the strategy’s value.

Lastly, it was interesting to discover that students considered eFundi (the University’s online learning platform) and the module’s e-Guide (a digital study guide including module outcomes, resources, activities and scaffolded assessments) as least useful (Figure 2). Previous students were quite reliant on this resource and the autonomy it gave them to learn on their own. Notes from classroom observations as well as comments made by the students in

their reflections indicated that the current group believed that the classroom discussions were the most useful source of information and the strategy they enjoyed the most. For example, one student articulated: “I LOVED it when we sometimes veered off topic and also talked about other important things...” A follow-up inquiry clarified these “other important things” as issues or interesting elements that the students might come across in their teaching careers one day.

So, even though students did not find problem-based learning as useful as some of the other strategies employed, they believed that most of the steps in problem-based learning contributed advantageous or even extremely useful learning to their preparation as teachers. It also provided them with insights into how the real world of teaching functions.

The question still remains: To what extent can problem-based learning contribute to the development 21st-century skills in a preservice Consumer Studies teacher preparation program? The next section attempts to provide some answers to this question.

The importance of and development of 21st-century skills

Numerous studies report that Consumer Studies teachers need several 21st-century skills to effectively facilitate practical lessons (Inn, 2017; Ngwenya & Shange, 2019; Umalusi, 2014). Thus, before commencing with the module, the students were surveyed on the importance of 21st-century skills that are required to enable Consumer Studies teachers to effectively facilitate practical lessons. The set of 21st-century skills described by Hixson et al. (2012) and listed in the conceptual-theoretical framework section of this article, was used in the pre-module survey (Figure 3). All students regarded skills needed for communication, creative and critical thinking, organization,

planning, problem-solving and time management as essential for preparing teachers for Consumer Studies practical lessons (Figure 3), even before they had any training for such lessons.



Figure 3: 21st-century skills that students believe a Consumer Studies teacher would need to facilitate effective practical lessons

At the start of the module, most students viewed collaboration skills, goal-setting skills and using technology to support teaching-learning as less important than the other 21st-century skills mentioned (Figure 3). Their lower regard for the importance of the skills needed for using technology in teaching and learning might have been based on their initial belief that fewer teaching technologies are used during practical lessons than in theory lessons. None of the students viewed any of the 21st-century skills as having little importance or as being insignificant.

Subsequent to their introduction to this set of 21st-century skills in the pre-module survey, each skill was briefly explained to them during one of the module contact sessions; therefore, they would have had a better understanding of each concept at the end of the module, when the post-module survey was completed. At the conclusion of the module, students were asked to indicate to what extent they believed their 21st-century skills were developed or improved as a result of the strategies used and resultant learning in the module (Figure 4).

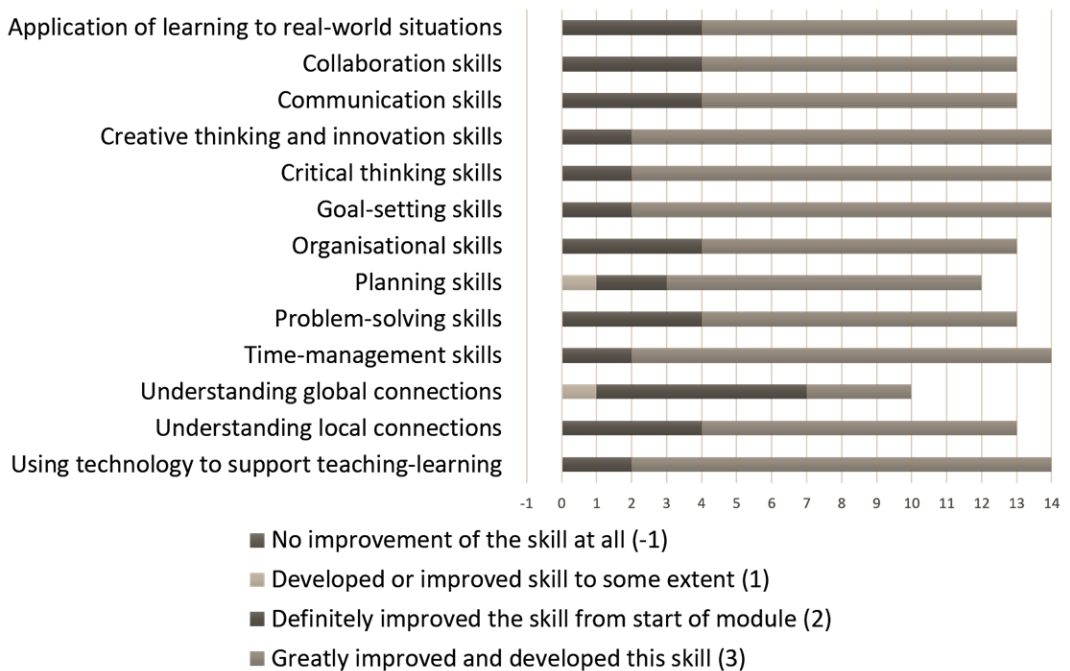


Figure 4: Students' perceptions of the improvement of their 21st-century skills after the module

The findings indicated that the students believed they had developed or improved most in their creative and critical thinking skills, goal setting and time management skills as well as the skill of using technology to support teaching and learning (Figure 4). Time management as well as creative and critical thinking skills were all viewed as essential skills that Consumer Studies

teachers should have before the students start the module (Figure 3) and, therefore, the finding that students believed these skills were greatly improved or developed in the module (Figure 4) was seen as especially positive.

As students initially indicated that the skills needed for using technology to support teaching-learning were less important than the other 21st-century skills (Figure 3), it was surprising to find that they believed this to be one of the skills they had developed the most (Figure 4). This discovery might be explained by the fact that one particular section of the module was devoted to using technologies in teaching and learning of practical lessons. The lecturer observed that the students thoroughly enjoyed that section, which introduced interesting and new technologies used particularly in practical production.

Despite the graph indicating that the students did not believe their collaboration skills improved as much as some other 21st-century skills (Figure 4), clear evidence thereof emerged from triangulation of the survey results, together with qualitative data from students' reflections and the lecturer's observations during contact sessions. For example, when asked to reflect on the single aspect of the module they found most useful, Participant 3 said, "I would say that the contact sessions was the best because we got to talk to each other and share our thoughts and experiences." Another question required students to comment on the part of the problem-based learning approach which they thought contributed most to their learning process. It elicited the following responses from three other participants:

"The discussions within the module with peers. Sharing of ideas and gaining different perspectives to the same problem help me prioritise my tasks and to help narrow down the choices"
(Participant 5);

“Report back to the group because then you’ll get good feedback from someone else’s perspective” (Participant 4); and

“Reporting back to the group and the analyzing, because with the analyzing you get to see everything ... you get to see the problems and solutions through others’ perspectives which is also nice because it is things you didn’t thought [sic] of but can also be helpful!” (Participant 2)

These responses and the notes the lecturer made during classroom observations point toward the co-construction of new knowledge, or social constructivism, and that it contributed to the learning experience in a positive way. Herrington et al. (2007, p. 2) describe such co-construction of knowledge to solve a problem as “true collaboration” and McGlynn-Stewart (2010) repeatedly underscores the importance of collaboration in developing and educating teachers.

It further emerged that students believed their skills to understand global connections were developed or improved the least (Figure 4). This was not too much of a concern, as global connections and interaction with teachers are not priorities for South African teachers, despite global interconnectedness increasingly becoming an issue that teachers must understand. However, and causing more concern, was the discovery, in second-lowest place, that students did not believe that their planning skills had improved much (Figure 4). One explanation could be that the students did not connect the various aspects of planning included in the module (such as lesson planning, practical organization, budgeting, or planning assessment) as contributing to their overall preparation to be able to plan Consumer Studies lessons. Consumer Studies teachers need to have well-developed planning skills which are needed for (amongst other elements) developing teaching plans, planning and managing time, infrastructure, equipment and finances in the subject (DBE, 2011). Planning lessons well, and achieving what was planned, will result in a more valuable learning

experience for learners (Inn, 2017). Negating the concerns about this finding slightly is the finding of a national investigation that the current Consumer Studies curriculum and associated documents for practical lessons are adequate to support and guide teachers in several aspects of planning in the subject (Umalusi, 2014).

From this section, it became clear that students were aware of the importance of 21st-century skills as part of their preparation as Consumer Studies teachers. Although the skills themselves were not measured, students believed that they did improve greatly in some of the 21st-century skills that were targeted to be developed in this module. If students' creative and critical thinking skills, together with the skill of using technology to support teaching and learning improved (as they believe), it will lead to interesting and innovative lessons. Combining the aforementioned skills with improved skills to set goals and manage time may well result in more effective learning experiences for the learners in these preservice teachers' classes in future. The positive constructivist learning that students experienced in the module may additionally inspire them to keep on collaborating and communicating with other teachers after their initial teacher training, thereby supporting lifelong learning.

The subsequent section addresses the contribution of the module to linking these preservice teachers' learning to the real world and preparing them for effective Consumer Studies practical lessons, in other words, if practice-changing practice took place in this action research study.

Bridging the gap to prepare students for the challenges of the real world

Finally, at the conclusion of the module, students were asked to reflect on how well they believed they were prepared for organizing, managing and

facilitating Consumer Studies practical lessons in comparison to before the commencement of the module. The aim was to explore if, and to what extent, the students believed that the overall learning in the module bridged the gap between their preparation and the real-world challenges they might face in their classrooms one day. In addition to students' written reflections, questions using a five-point Likert-type rating scale were used to collect the data, where 1=poorly prepared and 5=exceptionally well prepared (Figure 5).

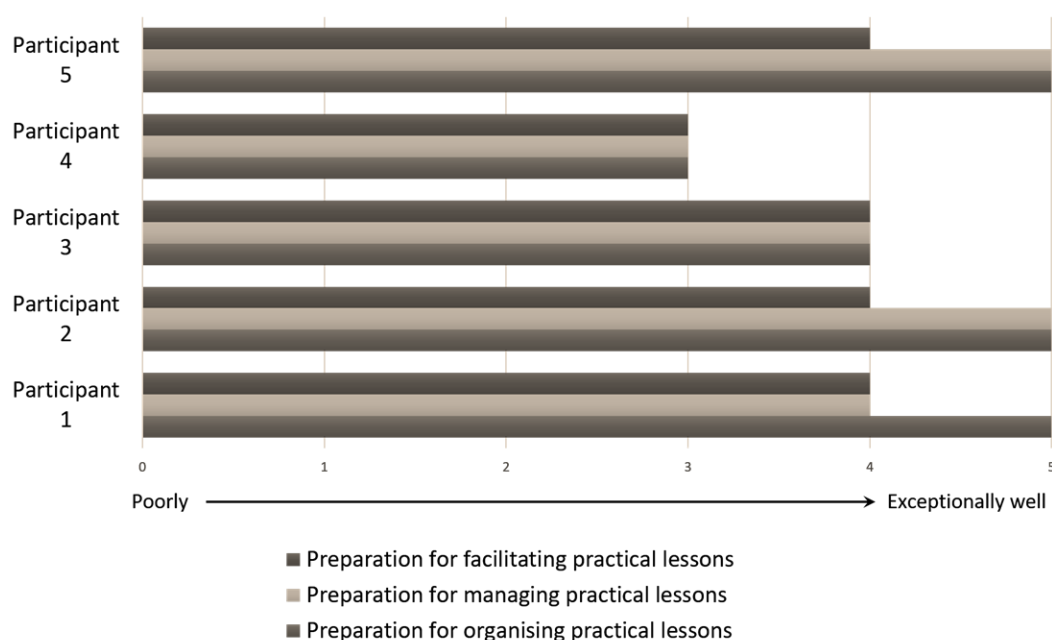


Figure 5: How well students believed they were prepared for Consumer Studies practical lessons

Participants 2 and 5 believed they were well prepared, but Participant 4 felt less prepared than the other students after the module (Figure 5). As all the students participated in all the activities and attended all contact sessions, such discrepancies in the perceived level of learning might be attributed to individual differences in levels of self-confidence or self-awareness which

develop as a result of the problem-solving and self-directed learning that is often fostered in problem-based learning (Shinde, 2014).

Figure 5 also shows that, in general, the students believed they were best prepared for organizing practical lessons but felt they were least prepared for facilitating practical lessons (Figure 5). This suggests that students still felt less prepared for actually facilitating or implementing practical lessons than for organizing or planning (also see Figure 4) the lessons. Besides one or two occasions during the work-integrated learning part of their teaching qualification, the students had few opportunities to present an actual real-life lesson, explaining their ambiguous feelings about conducting practical lessons. According to Inn (2017), newly qualified Consumer Studies teachers often lack confidence in their own ability to independently conduct practical lessons, underscoring the value of problem-based learning to help develop students' self-confidence. Consequently, it would be wise of module developers to not only focus on teaching-learning strategies but to also keep in mind the development of individual students and their particular needs, as well as students' experience of the learning process (McGlynn-Stewart, 2010).

Lastly, Wolff et al. (2015, p. 83) note that developing inexperienced preservice teachers' skills for effective classroom management, based on real-world scenarios, may foster these students' recognition and understanding of "the fundamental link between effective management and effective learning", which will be to the advantage of the learners in their classes someday and toward which this university will continue to strive in their teacher education programs.

Conclusions and recommendations

This study confirmed that problem-based learning can contribute to the development of 21st-century skills that Consumer Studies teachers will need to facilitate effective practical lessons. The strategy was valued by students for its constructivist learning and served to bridge the gap between their preservice teacher preparation and the challenges they might face in real-world practical classrooms in South Africa. Although students did not believe that problem-based learning was more useful than other teaching-learning strategies used in the module, they experienced most of the steps in the process as extremely useful. Linking the teacher preparation to a real-world problem through action research was a novel approach that afforded the students opportunities to positively collaborate and expand their views on real-world teaching.

In future, problem-based learning will continue to be implemented in this Consumer Studies teacher-preparation module based on the effectiveness thereof demonstrated in this study. However, it is recommended that a few adaptations be made to potentially improve its effectiveness in contributing to the learning of future students. Firstly, it will be useful to analyse students' individual learning needs before commencing with the module, as this will contribute insights into particular needs (for example, low self-confidence) that students have and the lecturer can attend to (if possible) in the module. Secondly, it is recommended that students are reminded of the interconnectedness of the various aspects that they are taught in the module. Such an overview could, for example, show how lesson planning, time management, stock-taking and budgeting are all linked to the skill of planning so as to give them insight into the bigger picture in support of their understanding of their preparation program.

Despite careful planning, there will always be some limitations associated with one's research. A small number of students participated in the study, and the findings are not generalizable. A formal tool to test students' performance in each of the skills could be used in future investigations to more accurately measure if, and to what extent, those skills were developed. Also, students did not select negative statements in the rating scale questions of the surveys. In future, it should be explained more clearly to them that their opinions are valuable, whether those are positive or not, and equal numbers of positive and negative statements should be included in each scale.

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CHAPTER 9:

An Exploration of Philosophical Literacy in the South African Context

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Abstract

The discipline of philosophy necessitates that budding philosophers learn and enact certain practices. However, while more established philosophers intuitively understand what philosophy is (and, more importantly, how it is practised), it is not always clear that such knowledge is communicated to the students in their classrooms. In this sense, engagement with philosophical disciplinarity often does not explicitly occur pedagogically, and as a result, students might be left to puzzle out the contours of the philosophical endeavour on their own. Concurrently there exists a lacuna, both in terms of philosophical reflection on philosophical disciplinarity and in terms of how such disciplinarity is taught (especially within the South African context). Such reflection is largely absent in both the philosophical and educational literature. This chapter aims to address the gap by means of the reflections of two philosophers from different philosophical traditions on their praxis and possible shortcomings in the philosophical classroom. This chapter takes an autoethnographic methodological approach as a means to share lived experiences in this regard. By engaging explicitly with philosophical disciplinarity from two (often divergent) traditions, this chapter aims to encourage philosophers to think critically about how their disciplinary praxis can and should be communicated explicitly to their students. From their autoethnographic reflections, it becomes apparent that the authors of the current study at times fall short of explicitly engaging with philosophical disciplinarity in their own classrooms, but also that certain corrective avenues

are available. By beginning a conversation, this work hopes to ignite a discussion regarding philosophical disciplinarity in South Africa through providing an initial conceptualisation of what this concept may entail.

Keywords: Philosophy; philosophical disciplinarity; philosophical literacy; autoethnography; philosophy in South Africa

Introduction and background

University lecturers implicitly engage with academic literacy whenever they enter their classrooms, but at the same time academic literacy is also a topic that lecturers rarely actively reflect upon and which is less frequently engaged with, concretely and explicitly, in the core curriculum¹⁹. Rather, many institutions, faculties and departments delegate direct engagement with academic literacy to support departments, and as a result, academic literacy is often relegated to generic courses, presented by a support department and offered to all students of a specific faculty or institution, or to something that students must access voluntarily in their spare time (in the form of a writing centre, for example). Some lecturers might provide discipline-specific writing guidelines before an assessment, but this is often where it ends. In this chapter the authors question whether this way of engaging with discipline-specific literacy is sufficient for philosophy education.

The authors, who are employed as lecturers in a representative higher education philosophy department, will investigate the phenomenon

¹⁹ University lecturers are for the most part synonymous with subject [discipline] specialists. While literacy work is just one part of a much larger higher education system, it is posited that such work forms a vital part of the academic's work in academia.

whereby the literacies (as mentioned above) are often not overtly addressed in the classroom. While there are some attempts made by professional academic philosophers to deal with philosophical pedagogy more broadly in their classrooms (as, for instance, the international journal *Teaching Philosophy* demonstrates), philosophers tend to occupy themselves with more abstract questions during contact sessions with students. This problematic situation is further intensified when one considers the nature of the philosophical discipline itself; philosophy is one of the oldest disciplines at most universities, with roots in ancient thought, and has seen its character shift repeatedly over two and a half millennia due to its close relation to broader historical shifts, such as the Middle Ages, or the rise of science. One may therefore say that what happens in contemporaneous philosophy departments, embedded in the neoliberal university, is vastly different from how philosophy would have been conducted three hundred years ago during the Enlightenment, and also would be vastly different from how philosophy was conducted in the mediaeval period.

The teaching of philosophy is therefore a complicated matter, since it is a long-established, constantly shifting, and far-reaching discipline that is related to many other fields of inquiry. In addition, there are particular philosophical styles to which philosophers adhere – such as the analytic, continental, and African traditions. Such styles or traditions are often practised in an uncommunicative manner by scholars in the broader field, generally because their methods vary in terms of specific aspects, such as the verification of arguments and the scope of inquiry. While philosophers themselves might be aware of these distinctions, and might even explicitly engage with their differences in their own philosophical practice and research, it is not clear that such differences are always explained to students in the classroom. Furthermore, the specific literacy pertaining to each of these styles is not often made explicit, and since entire departments often

fall into one of these traditions (analytic, continental, African), one finds further obfuscation of the need for an explicit engagement with the different ways philosophy can be practised. Taking such consideration seriously illustrates that philosophical literacy is a multifarious, nebulous, and challenging concept.

Following the afore-going discussion, in relating the practice of philosophy in South Africa to literacy, leads the authors to the following research questions:

- How can 'philosophical literacy' be understood in the institutions of higher education (HEI) in South Africa?
- How should philosophy lecturers at HEIs engage with 'philosophical literacy'?

Subsequently, this chapter has three broad aims:

- To provide an initial exploration of 'philosophical literacy' in the South African context;
- To argue that professional philosophers need to explicitly engage with and reflect on philosophical literacy and its related practices; and
- To provide an example of overt engagement with philosophical literacy from the autoethnographic perspectives of two philosophers who confront their own discipline from within the framework(s) of their different traditions.

The researchers' motivation for writing this paper together is twofold: Firstly, numerous discussions, often of an informal nature, have revealed that they position themselves in similar ways with regards to education generally, and in terms of philosophy education more specifically. Throughout, however, they have also been cognisant of how such different philosophical traditions have shaped their views in this regard. One author (Dr Yolandi Coetser) is an

analytically-trained philosopher who has been trained in a particular philosophical tradition that prioritises argumentation, logic, reason and analysis, but who has also worked a bit in the African tradition. The other author (Dr Jean du Toit) is a continental philosopher whose philosophical tradition focuses on history, politics, the self and self-consciousness, desire, freedom, and the will in relation to the human condition. Both authors are emerging scholars on an NRF rating-track, but both also function along different lines of philosophical tradition. Thus, secondly, the researchers' different backgrounds provide a space for a positive (and potentially productive) tension that fosters constructive dialogue and insights into diverse approaches.²⁰

In this chapter the researchers critically engage with the concepts of 'literacy, language and epistemological access' before discussing the topic of 'philosophy, philosophical traditions and philosophical literacy'. Thereafter, the autoethnographic methodology is unpacked before the researchers give their own autoethnographic account of how they understand student philosophical literacies. In conclusion, a discussion of what philosophical literacy might entail in South Africa is proffered.

20 In the researchers' university-specific milieu, the continental tradition is more prominent than the analytic tradition, but – taking into account the philosophers across all the campuses – a mixture between the continental, analytic, and African traditions is revealed.

Conceptual framework

Literacy, language and epistemological access

Before engaging with the philosophical context in particular, a series of definitions are offered of the concepts with which the authors will be engaging. This section begins by describing two models of literacy proffered by Brain Street (1984).

The first of these models is the ‘autonomous’ model. By the 1980s (and perhaps even to this day), many educationalists held the view that people share “basic functions of the mind, such as logical and abstract abilities” (Street, 1984:19). They assumed that literacy was ‘neutral’; literacy entailed a mere skill to be acquired (Wilmot, 2015), or it involved the simple “encoding and decoding of printed text” (Boughey & McKenna, 2016:3). Notably, this view of ‘literacy’ is based on a Western hegemonic conception that centres very particular types of knowledge and practices. Street (2003:77) explains that the “autonomous approach is simply imposing [W]estern conceptions of literacy on to other cultures or within a country those of one class or cultural group onto others. This literacy model is problematic because it assumes that literacy is “simply a technical and neutral skill.” The ‘autonomous’ model is thus representative of a particular historical-contextual conception of how ‘literacy’ may be understood (specifically in the 1980s, but also in some quarters today).

In contrast to the above view, Street (2003:77) introduces the ‘ideological view’ which “offers a more culturally sensitive view of literacy practices as they vary from one context to another”. This view sees literacy as a social practice that is “always embedded in socially constructed epistemological practices” and Street argues that reading and writing are therefore rooted in “conceptions of knowledge, identity and being” (2003:77-78). This view

suggests that ‘academic literacy’ may be defined as a “socio-cultural” event that is actualised in a multiplicity of ways (Wilmot, 2015). Literacy practices are therefore understood as socially embedded, with epistemological characterisation of literacy being necessarily embedded and constructed from within a particular worldview (Wilmot, 2015).

Although Street introduced the ‘ideological view’ almost four decades ago, ‘literacy’ (in its most basic form) is often still regarded as relating only to the ability to read or write.²¹ Even though basic literacy remains a problem for many societies, including South Africa,²² in the university context this basic form of literacy is taken for granted, since it is assumed that all students who arrive at university can read and write by virtue of having passed Grade 12. The ability to read or write does not necessarily predict whether an incoming first year student has the academic literacy required for successful completion of their studies, especially since academic literacy is defined differently than ‘basic literacy’. Indeed, “many first-year students possess inadequately-developed reading skills and poor language ability” (Zulu 2017) Following the Organisation for Economic Co-operation and Development (OECD), Khuluvhe (2021:4) defines literacy as “the ability to identify,

21 Compare also the accounts provided by the New London Group’s deliberation about the state and future of literacy pedagogy. The New London Group published a manifesto (New London Group, 1996), and Cope and Kalantzis (2000) outlined what may be called a ‘pedagogy of multiliteracies’, to suggest that a pedagogy of multi-literacies requires agency in the meaning making process, whereby students need to be active constructors of knowledge themselves.

22 According to the Department of Higher Education and Training, 12% of South Africans are illiterate – meaning that 1 in 10 people or 4.4 million adults cannot read or write (Khuluvhe, 2021: 6). Note that this is a reference to adult basic literacy, since students entering the higher education institution are expected to already be skilful readers and writers.

understand, interpret, create, communicate²³ and compute, using printed and written materials associated with varying contexts”. This definition is suggestive of the type of competencies that are needed at tertiary level. Literacy ought therefore to be understood as a much broader concept, beyond mere reading and writing. At university, literacy should be understood as taking on an even more specific character, demanding a form of literacy that is characterised differently from the functional literacy described above. The pertinent question is whether this is actually how literacy is understood in the university context. We may therefore ask whether there is really an understanding of literacy as a social practice, as is suggested by Wilmot (2015) above? Or does the autonomous model still dominate in HEIs across South Africa?

The interwovenness of language with literacy must be considered, both to further complicate the issue of literacy and to enhance one’s understanding thereof. Language is particularly contentious in South Africa, having been used as a tool of oppression during Apartheid, but also because the country has eleven official languages. This means that, for the most part, people (students and academic staff) who engage in academic activities are often doing so in their second, third, fourth or even fifth language. A study based at a South African HEI showed that first year students who spoke English (the lingua franca in the vast majority of academic spaces) and Afrikaans as a home language could be classified as ‘low risk’ students, i.e. in low or

23 The authors of this chapter suggest that even considering this aspect alone, there are a variety of competencies that would be needed from a student. Sandra Savignon and Margie Berns (1984) highlight, for example, different communicative competencies such as grammatical or linguistic competence, socio-linguistic competence, strategic competence and discourse competence that all form part of communication. This alone can be a minefield for students who are not first language English speakers.

negligible risk of failure based on a Test of Academic Literacy (Boakye, 2015:4). However the majority of those who spoke Indigenous South African Languages, however, were in the 'high risk' group (Boakye, 2015:4). While this demonstrates a correlation between home language and academic success, one must be careful to not use 'language problems' as a "convenient catch-all explanation for the racially differentiated success rates", as Boughey and McKenna (2016: 2) argue. Elizabeth Pretorius and Nanda Klapwijk (2016:3) argue that "poor literacy results cannot be solely attributed to second language instruction as teachers and learners are struggling with literacy in the African Languages as well as English". Rather than seeing language as neutral, one needs to understand that language is a social phenomenon embedded in, influenced and shaped by social structures such as class, gender and race (Boughey & McKenna, 2016: 3). The interwovenness of language and literacy in the South African context is complex and cannot be explored in sufficient depth here, beyond intuiting the general relation. There are, however, numerous academic works that deal with this issue (cf. Weideman, Read and du Plessis, 2020; Weideman, du Plessis and Steyn, 2017; Du Plessis, Steyn and Weideman, 2016).

One crucial point to be mentioned against this background is the pertinent concept of epistemological access. A large proportion of South Africa's population suffered from epistemological deprivation during Apartheid, meaning that "many learners in our country [were deprived] of a fair opportunity to gain access to the kind of knowledge that is supposed to be distributed in formal schooling" (Morrow, 2007: 188). Although students are no longer 'formally excluded' from HEIs, mere 'formal access' is not identical to 'epistemological access'. Morrow (1994: 40) argues that "[t]o register as a student at a university is not yet to have gained access to the knowledge that the university distributes". Students may therefore have formal access to HEIs, which may lead to acquiring knowledge, but not epistemological access,

which cannot be given; however, access to this kind of knowledge means “learning how to become a participant in an academic practice” (Morrow, 1994:40).

The afore-going discussion serves to contextualise literacy in a broader sense. However, the purpose of this paper is not to consider academic literacy as social practice generally, but rather to consider this nebulous concept from within the researcher’s own disciplinary milieu: philosophy. The following section examines the pertinent literacies in terms of philosophy.

Philosophy, philosophical traditions, and philosophical literacy

The Greek root of the word *philosophy* connotes a ‘love of wisdom’, and it can also suggest a ‘friend of wisdom’ since *philos* (φίλος) means friend in Greek, literally translated. Philosophy entails the apprehension of questions that are of determinate worth and significance for all human beings, relating to aspects such as truth, integrity, righteousness, and logic. The major sub-disciplines of philosophy reflect these questions to encompass fields such as ethics, metaphysics, epistemology, logic, aesthetics, and the philosophy of science, philosophy of law, philosophy of language, political philosophy, and philosophy of religion. Furthermore, within these broad and general fields, there is a further distinction between analytic and continental philosophy (as has been indicated in the introductory section).

The split between the analytic and continental traditions reveals the discipline of philosophy to be a varied field of inquiry that utilises different methodological approaches (Trakakis, 2008: 46-53). Most philosophers intuitively recognise the difference between the analytic and continental

distinction, but explaining this distinction to someone outside professional philosophy is not a simple task. Even more pertinently, explaining this distinction to students who might be coming to grips with the general philosophical discipline poses a further challenge – they need to be familiarised, it is often assumed, with philosophical concepts and ideas before they may be familiarised them with philosophical literacies, if at all. The distinction between analytic philosophy and continental philosophy is not superficial, however – there are relevant and significant differences in terms of how continental and analytic philosophers *practise* philosophy, so much so that entire departments²⁴, journals²⁵, and conferences²⁶ are devoted to one or the other. Indeed, the distinction between analytic and continental philosophy, which arose in the late nineteenth and early

24 For example the Department of Analytic Philosophy at the Institute for Philosophy in the Czechia (<https://dap.flu.cas.cz/en>) or the continental department at Loyola University (https://www.luc.edu/philosophy/research_continental.shtml).

25 Some examples of Analytic journals are: *Analytic Philosophy* (<https://onlinelibrary.wiley.com/journal/2153960x>), *Journal for the History of Analytic Philosophy* (<https://jhaponline.org/>), *European Journal of Analytic Philosophy* (<https://eujap.uniri.hr/>), *Argumenta - Journal of Analytic Philosophy* (<https://www.argumenta.org/about/>); examples of continental journals are: *Continental Philosophy Review* (<https://www.springer.com/journal/11007>), *Journal of Continental Philosophy* (<https://www.pdcnet.org/jcp/Journal-of-Continental-Philosophy>), *Comparative and Continental Philosophy* (<https://www.tandfonline.com/toc/yccp20/current>), *Journal for Continental Philosophy of Religion* (<https://brill.com/view/journals/jcpr/jcpr-overview.xml>).

26 Some analytic conferences are Salzburg Conference for Young Analytic Philosophy (<https://philevents.org/event/show/96361>), 10th European Congress of Analytic Philosophy (<https://ecap10.sites.uu.nl/>), 6th Beijing Analytic Philosophy Conference (<https://philevents.org/event/show/71522>); while examples of continental conferences are Warwick Continental Philosophy Conference (<https://warwick.ac.uk/fac/soc/philosophy/research/activities/postkantian/events/wcpc/>), International Conference on Continental Philosophy (<https://waset.org/continental-philosophy-conference-in-july-2022-in-istanbul>), Australasian Society for Continental Philosophy Conference (<https://bond.edu.au/intl/ASCP2021>).

twentieth century, includes both methodological and geographical differences. Although the geographic characterisation of philosophy is not always indicative of content, the authors of this chapter do find that continental philosophy arose on the 'continent' of Europe – specifically so in the case of French and German philosophy – and that geographic considerations are not negligible. So too with analytic philosophy which is more typically encountered in the Anglophone world – the United Kingdom, the United States and Australia.

Analytic philosophy suggests a methodological approach wherein typical philosophical problems may be solved through the logical analysis of key terms, concepts, or propositions. According to Trakakis (2008: 46), analytic philosophers think of their inquiries as analogous to those pursued in scientific disciplines, with the ahistorical nature and lack of engagement with the wider cultural milieu in such forms of philosophical questioning being similarly reflective of the sciences (Trakakis, 2008: 47). As the name suggests, analytic philosophy does not focus on authors as much as on analysis – there are standard examples and thought experiments, patterns of arguments, and deliberately abstracted models. Pascal Engel also suggests that the tradition “mimics the scientific style of inquiry, which proposes hypotheses and theories, tests them in the light of data, and aims at widespread discussion and control by peers” - in many ways analytic philosophy is therefore seen as continuous with, or an extension of, the sciences (Engel, 1999: 222; Trakakis, 2008: 47).

An important feature of analytic philosophy is its tendency towards specialisation, which sees the philosopher working in a distinct subfield -

philosophy of mind, for example - with a focus on a specific issue therein - such as the mind-body problem (Soames, 2003: 463). This suggests a piecemeal or semi-independent approach to a narrow set of questions, which is reflected in the popularity of shorter journal articles in the tradition (Trakakis, 2008: 47). The writing style of analytic philosophy tends to be dry (perhaps even coldly analytical), works are written in simple English, and there is a consistent focus on rigorous argumentation. Analytic philosophy found traction at the end of the 19th century and the beginning of the 20th century with thinkers like Bertrand Russell (1872-1970), Gottlob Frege (1848-1925), G.E. Moore (1873-1958), and Ludwig Wittgenstein (1889-1951). Other significant figures include W.V.O Quine (1908-2000), Saul Kripke (1940-), and Karl Popper (1902-1994).

Continental philosophy, in contrast, represents a more geographically-defined approach, with philosophers like Jacques Derrida (1930-2004), Edmund Husserl (1859-1938), Martin Heidegger (1889-1976), Friedrich Nietzsche (1844-1900), Theodor Adorno (1903-1969), Max Horkheimer (1895-1973), and Michel Foucault (1926-1984) being some of the central thinkers of this tradition. In contrast to analytic philosophy, which takes science as the basis for discourse, we find in continental philosophy a blueprint for philosophical inquiry in the arts or humanities, and particularly in literature and literary criticism, with Neil Levy suggesting that the novelty and revolution of modernist art is a model for this tradition (Levy, 1996: 80; Trakakis, 2008: 46). Continental philosophy incorporates a variety of schools of thought and methodologies, such as existentialism, phenomenology, hermeneutics, structuralism, Frankfurt School Critical Theory, postmodernism, and offshoots from psychoanalytic theory – with the vast

majority of continental philosophers being critical of the intellectual and existential implications of scientism as reductive account of science (Trakakis, 2008: 50).

Continental philosophy often points to the “transcendental” or “absolute” consciousness as a means to provide greater significance to ordinary experience, and philosophers working in this tradition see the philosophical enterprise as the creative exercise of intellectual imagination (Gutting, 2012). Instead of presenting an account of continuous progress, we find instead in the continental tradition the idea of continuous revolution: the rejection of traditional methods and styles for ones that are unforeseen or overlooked as a means to see the world anew - in other words, continental thought sees as important the destabilisation of traditional ways of thinking (Trakakis, 2008: 51). Hermeneutics play a central role in this tradition, over and above formalisation or knowledge-advancement, with cultural critique (of particularly the human condition) also being indicative of this style of philosophy. Furthermore, continental philosophy focuses on specific authors: Philosophers may often specialise in one or two authors only, and would, for instance, be known as a ‘Heideggerian’ or a ‘Deleuzian’. Continental philosophy also tends to be more interested in the phenomenological rather than in abstract rationalising, and the writing style may employ poetic and sometimes flowery language. This writing style is reflective of the continental account of philosophy which sees philosophy as a means of creation for a fresh and imaginative view of the world, with invention rather than analysis taken as central to develop a new vocabulary and a new vision of the world.

Naturally, there is a tension between these two approaches regarding philosophy – an analytic philosopher may see continental philosophy as obscurant and subjective, whereas a continental philosopher may regard analytic philosophy as superficial and overly concerned with the conceptual. Raoul Moati (2014: 1) notes that “philosophy has rarely, before the twentieth century, appeared as profoundly split into two currents as divergent and irrelevant to each other as continental philosophy and analytic philosophy”. In the 1970s, a debate between the continental thinker Jacques Derrida and the analytic thinker John Searle demonstrated the seeming irreconcilability between these two traditions. This discussion has been labelled a ‘failed’ debate since there seemed to be little understanding of the other side’s view on the part of both these thinkers. Alan G. Gross (1994: 345) explains that “[i]nstead of searching for a common ground from which they could engage in a potentially fruitful exchange between two widely divergent intellectual perspectives, instead of learning from each other, each participant merely elaborated his own position and attacked his opponent with a gusto and a venom usually reserved for siblings and ex-spouses”.

In the context of these two seemingly irreconcilable traditions, particular challenges arise regarding academic literacy (or, more specifically, philosophical literacy) in South Africa. In addition to hosting both of these traditions, South Africa (as with many other countries across Africa) is also home to a third tradition, namely African philosophy. African philosophy is in itself a varied tradition with a multitude of trends. Paulin Hountondji, for

example, defines African philosophy²⁷ as “a set of texts, specifically, the set of texts written by Africans and described as philosophical by their authors themselves” (1983: 20). Henry Odera Oruka (1990) in turn explains that there are four ‘trends’ in African philosophy: Sage, ethno, political and professional philosophies. Ikechukwu A. Kanu (2013) argues that there are, in addition to Oruka’s four trends, two more, namely the literary and hermeneutic trends. African philosophy can also be divided in the Francophone (see. Irele, 1998) and Anglophone traditions (see. Wiredu 1998).

South Africa therefore represents something of a hybrid philosophical context. Some departments tend to be more analytically inclined (like the University of Cape Town and the University of KwaZulu-Natal), whilst some are more continentally inclined (like the University of Free State and North-West University) and others tend to be hybrid departments (like the University of Johannesburg and the University of Pretoria). Other institutions (like the University of South Africa) have a strong African philosophical focus, with many others also including African philosophy in their undergraduate and postgraduate offering (such as North-West University and University of Johannesburg). Such a hybrid context necessitates varied and sometimes contradictory philosophical literacies from philosophy students who come from different, but even sometimes from within the same, institution. So, for example, a student at the University of the Witwatersrand might be required to possess specific skills in terms of logical analysis, while a student at North-

27 For a useful discussion on the evolution and history of African Philosophy see Rettová (2021).

West University might need to be more linguistically inclined. Occasionally, these distinctions align with the traditional 'Afrikaans' and 'English' distinctions, where former 'Afrikaans' universities – for instance, the former Rand Afrikaans University (now University of Johannesburg), University of Pretoria and former Potchefstroom University for Christian Higher Education (now North-West University) were more continentally oriented, whereas former 'English' universities – such as the former University of Natal (now the University of KwaZulu-Natal) and the University of Cape Town – were more analytically oriented.²⁸ This distinction seems to be fading as older professors retire and younger academics are appointed.²⁹

Additionally, there is now a strong focus on African philosophy in many of these departments, with some departments resultantly representing a mixture of continental, analytic and African philosophy. As has been suggested before, each of these three traditions (continental, analytic and African) entails different student literacies and related skills. These skills, in turn, are quite different from those posited by many philosophers introduced to students in the curriculum, such as the ancient and medieval philosophers like Socrates (470-399 BCE), Plato (428/427-348/347 BCE), Aristotle (384-322 BCE) and Augustine of Hippo (354-430), Boethius (480-524), and Thomas

²⁸ Compare, for example, how the changes at philosophy at SA institutions are discussed by Simphiwe Sesanti (SAJP, 2015. 34:3).

²⁹ The shift in historical distinctions with regard to South African philosophy provides a further impetus for our autoethnographic method. Since both researchers are emerging scholars on an NRF rating-track, they find themselves in a position of negotiation between these dynamic institutional tensions and find that they consistently need to (re)position themselves in terms of disciplinary and societal requirements and needs.

Aquinas (1225-1274) and the Renaissance and Enlightenment philosophers like René Descartes (1596-1650), Baruch Spinoza (1632-1677), David Hume (1711-1776), Thomas Hobbes (1588-1679) and Immanuel Kant (1724-1804).

While the distinction between analytic and continental philosophy is still prevalent, there are also those who argue that the distinction should be collapsed, or that it is no longer an important distinction (see. Andina 2014; Thomson, 2019; Mizrahi and Dickinson, 2021). Interestingly, an empirical study by Moti Mizrahi and Mike Dickenson (2021: 677) found that their “data reveal no significant differences between the types of arguments advanced in articles published in [analytical philosophy] journals and the types of arguments advanced in articles published in [continental philosophy] journals.” The authors of this chapter suggest that, while the distinction highlights important differences in terms of methodological approach, philosophers must be wary of focusing so much on the differences between philosophical styles that the similarities are overlooked. Moreover, the professional philosopher needs to be aware that the overemphasis of this split may sometimes result from extra-philosophical reasons, such as political or administrative motivations. Between the three traditions discussed thus far (and likely others, such as Eastern philosophy), there is potential for constructive and positive points of connection that could serve to enrich philosophical discussion.

This historical discussion nevertheless illustrates that different forms of philosophical knowledge can and do compete with one another, entailing that certain approaches are seen to be more legitimate in specific contexts. This demonstrates the multifarious nature of philosophical literacy in the

South African context. A glaring omission exists in literature, however: while philosophical literacy has been explored in other parts of the world, there is no evidence of engagement with this concept in the South African context.

How have scholars from other geographical locations engaged with philosophical literacy? Relatively little is written on this topic, and what has been written is disparate and mostly unrelated to each other. One article examines the “philosophical literacy of preservice teachers” (Alemán, 2003: 35), while another reports on assessing philosophical literacy (Kelton, 1997). Another article documents the “design and implementation of a team-taught curriculum which integrated two half courses in writing and philosophy” (McCourtie & Miller, 1997: 113). A seemingly self-published book engages with very close readings of key philosophical texts, exemplifying a method of philosophical literacy known as *Talmudic* (Zaslavsky, 2016). Another text argues for promoting philosophical literacy in schools, professional education, and continuing professional development to curb the lack of ethical reasoning in professional practice (Knight, 2020: 37). In this example, philosophical literacy is equated with moral reasoning, which, although related, are two different concepts. A further article discusses the importance of teaching philosophical literacy by design rather than by accident, suggesting that “philosophical teaching is teaching that assimilates philosophical activities to a public model in which students are seen as apprentices” (Miller, 1995: 39).

In her article, Alemán holds that philosophical literacy enables students to think deliberatively and reflectively on the “exigencies of their practice” (2003: 38). Key aspects of philosophical literacy are reflection, hermeneutics

and equity. While these are central aspects of the philosophical method, such concepts remain quite abstract and do not encapsulate what the authors understand as *philosophical literacy*. The discussion further highlights the unique problems in philosophical literacy, namely that philosophical student literacy is not a single concept but is instead nebulous – it may mean different things, depending on the tradition, department and even country where a specific module is presented. Street's (1984) definition of the 'ideological view' which describes literacy as a social practice, embedded in socially constructed epistemological practices, offers a remedy for this problem, and it is useful to consider philosophical literacy through this lens.

Additional problems regarding academic literacy arise in terms of epistemological inaccessibility. While suggesting a range of approaches and prominent figures, philosophy in South Africa still skews towards European and American worldviews that inhabit the historical Westernised logic of colonialism and progress. In a sense, students often experience that philosophy speaks to a different sensibility than that of Southern Africa (particularly in terms of said historically Westernised canon). At South African universities, there is thus a renewed call to decolonise the philosophy curriculum to increase access to philosophy, while remaining true to the requirements of philosophical nuance and reasoning that reside at the discipline's core. It is against this background that the authors decided to reflect on their own understandings of philosophical literacy. In the section that follows, this particular self-reflexive methodology – *autoethnography* – is explained.

Methodological approach

It is against this multitudinous and fragmented background that the discussion in this chapter is presented. The two authors of this paper come from different traditions – one is an analytically trained philosopher who works in environmental philosophy, whereas the other is a continentally trained philosopher whose main focus is philosophy of technology. Although the researchers come from diverse traditions, they are both employed at the same institution and, as mentioned earlier, they also share common perspectives on teaching philosophy while at the same time being aware of the tension between their approaches. They are also aware that, sometimes, the distinction between analytic and continental philosophy is perhaps over-emphasised and that this emphasis leads to a communicability breakdown between said approaches – inherently, while recognising the relevance and even importance of some aspects of the split, the authors of this chapter argue that similarities between the styles of philosophy should continually be explored.

In order to address the issue of philosophical literacy and the existing tension between the two approaches described above, the autoethnographic discussion below explicates the two authors' individual experiences of thinking about philosophical literacy in South Africa. Cohen et al. (2018: 297) describe autoethnography as “a derivative of ethnography, [and] a process, method and product that seeks to describe and systematically analyse (graphy) personal experience (auto) in order to understand cultural experience (ethno)”. Campbell (2015: 96) explains that “[a]utoethnography is a research method and methodology which uses the researcher's personal experience as data to describe, analyse and understand cultural experience”, and that “by its very nature, autoethnography is both process and product”.

While this method is frowned upon by some authors (Delamont, 2007; Atkinson, 2006; Madison, 2006), others feel that it is a legitimate, intriguing, and promising qualitative method. Sarah Wall (2008: 39) explains that autoethnography emerges from postmodern philosophy, “in which the dominance of traditional science and research is questioned and many ways of knowing and inquiring are legitimated, autoethnography offers a way of giving voice to personal experience to advance sociological understanding”. Different researchers use autoethnography for different reasons; and in this case, the researchers approached autoethnography as educators. In this sense, this can be seen as “a form of critical pedagogy in its commitment to transformative and emancipatory processes and the social construction of knowledge” (Cohen et al., 2018: 297). In order to write their autoethnographic accounts of philosophical literacy, the researchers reviewed “personal experience reflexively, [and] retrospectively” and, by so doing, distilled “key issues” (Cohen et al., 2018: 298). In following other autoethnographic researchers, as well as Ellis, Adams and Bochner (2011), the researchers see autoethnography as facilitating the process of sharing personal, lived experience (auto) about the culture of philosophical literacy (ethno) in a systematised manner (graphy).

Since autoethnographies are often written from a first-person perspective, what follows will be written in the first-person perspective of each of the authors, documenting their perspectives on student and philosophical literacy.

Results – Autoethnographic vignettes

At the beginning of this chapter, one of the aims listed was “To provide an example of overt engagement with philosophical literacy from the autoethnographic perspectives of two philosophers who confront their

discipline from within the framework of different traditions”. In the following two vignettes, this overt autoethnographic reflection is provided. The following sections serve as an example of overt engagement with philosophical literacy by two philosophers in the South African context.

Yolandi’s shifting perspective on student literacies

I first walked into a Philosophy classroom as a wide-eyed and bushy-tailed 19-year old in 2005. I took philosophy by chance as a second major for my journalism degree – it simply ‘looked interesting’. Within weeks, I realised that this was what I wanted to do for the rest of my life. Since 2005, I have pursued philosophy as a career path. I finished my degree in Journalism and Philosophy, then I completed an Honours, Masters, and finally a Doctorate in Philosophy.

I am therefore a relatively young academic, having graduated with my PhD about four years ago. I have spent many years as an ‘adjunct’ or ‘contract’ lecturer at a variety of institutions: from private to public, lecturing in both contact and distance modes. In 2022 I was appointed on a permanent basis at a university in South Africa. My teaching experience is varied – while I have taught mostly philosophy, I have also spent quite some time teaching other modules. These modules were often ‘supportive’ modules, meaning that they were either philosophy modules taught to non-philosophy students, or they were non-philosophy modules.

I have at least two pillars that underpin my own view of teaching philosophy. The first pillar is founded in a social constructivist approach, which entails seeing the student as actively participating in the epistemic process. The lecturer and student are two sides of the same coin. While the lecturer has a moral obligation to prepare, engage and take her occupation seriously, innovating and adapting as she matures, so too the philosophy student

should not be seen as a tabula rasa who waits to receive whatever the lecturer presents to her. On the contrary, there ought to be a mutual exchange of ideas, which is aided and influenced by the strengths and weaknesses of the lecturer and student. The second philosophical pillar is based on critical pedagogy – the role of philosophy is not merely to investigate the world but also to make the world a better place. While philosophy can give the student the tools to critically examine an unjust world, there ought, simultaneously, be imperative to action. In the preface to Paulo Freire's *Pedagogy of the Oppressed*, Richard Shaull writes,

"There's no such thing as neutral education. Education either functions as an instrument ... to bring about conformity, or it becomes the 'practice of freedom', the means by which men and women deal critically and creatively with reality and discover how to participate in the transformation of their world."

Taking into consideration the stark dehumanising reality of the history of our country, as well as what it meant for the education of the masses, as university educators, we should take seriously the task of education in deconstructing and decolonising the curriculum by recentering the human in the humanities. In this space, philosophy can be invaluable – it provides the tools to reflect, examine, deconstruct and reconstruct critically, and proffer the intellectual apparatuses that speak truth to power.

Regarding my own tradition, I would broadly characterise myself as 'analytically-trained'. While my undergraduate consisted of modules that were both analytic and continental, there was also a focus on ancient and medieval thinkers, as well as an engagement with some African philosophy. However, my supervisors for both my Masters and my PhD were more analytically orientated (at least in method), and this cemented my own analytic methodological approach. That being said, I do not consider myself as only an analytic philosopher. Throughout my career, I have worked with

people who have broadened my own approach - one colleague who I worked closely with emphasised the importance of philosophical historicity. Working with him, I began to consider the historical trajectory of the ideas I was working with. This meant that I was reading very widely - from pre-Socratic texts that are more than 2500 years old, to typically continental thinkers like Nietzsche and Heidegger, to medieval scholars like Thomas Aquinas. The analytic / continental distinction for me is less of a distinction in content, and is rather more a distinction of writing style - I have been taught to value clarity and logical rigour above all else, and this is why I would still consider myself more analytic than continental.

Regarding my teaching practice and engagement with literacy, I have taught entire modules on academic literacy. These were a more general, stand-alone courses and reflected an autonomous model of literacy, without any subject-specific context. Earlier in my career, I thought about philosophical literacy in a more basic way, never really considering what it was explicitly. Reflecting on my previous practices, I often equated philosophical literacy with philosophical writing – the latter being a skill I have spent the better part of the past 15 years refining. This view was then expressed in my assessment approach too: most of the assessments I gave my students were essays (with occasional short or multiple choice questions). I would, generally, spend a lecture or two per semester talking about writing more generally and also about writing philosophy more specifically. I have even created videos on philosophy reading and writing at. Reflecting now on this approach, I don't think I really went 'deep' enough. I did not reflect that deeply on my own disciplinarity (as well as being critical of my own training) and how I was conveying it to students. This is ironic since, in philosophy, reading and writing are all we do – we do not have 'external' praxis to help us (like data collection and data analysis). We only have our own thoughts and words.

After having completed a course on academic disciplinarity, I feel I have a much deeper and more useful understanding of what literacy means, and specifically, of what I should be doing as a philosophy lecturer. A paper I read during this course that resonated with me, was Russell, Littler and Chick's 'Surfacing disciplinarity: citation as a site for integrative learning' (2020). To borrow their phrase, I was not doing enough to 'make students aware of [philosophy's] distinct disciplinary [lens]' (2020: 2). They show how disciplinarity is often part of our 'expert blind spot' (2020: 5), meaning that even though disciplinarity is so fundamental to our 'professional bedrock', we unintentionally omit to tell students about it. I am definitely guilty of this omission. Russell, Littler and Chick suggest using the tool of citation to teach disciplinarity, which is an approach I did not consider using before.

Reflecting on disciplinarity inevitably leads to a reconsideration of assessment practices. I have been slowly incorporating more 'alternative' assessments in my classroom. This means moving away from 'traditional' assessment methods, i.e., writing essay after essay, towards 'alternative' assessments, like making infographics and videos, etc. I need to consider what this type of 'alternative assessment' means for philosophical literacy - how do we balance the necessity of philosophical writing with also testing other important skills, like summarising and presenting information. If I ask a student to create an infographic, 'writing' is less of a focus and instead, 'visual literacy' becomes the mode of communication. This then challenges the traditional understanding of philosophy as something communicated almost exclusively through the use of words, and rather suggests something that can be made explicit through other forms of communication as well.

The continued complexity of teaching in a pandemic has also meant a re-evaluation of my own teaching practice. Currently, we are teaching in a hybrid mode as an evolution of the online modality that was necessitated

because of the pandemic. This modality also challenges some of the bedrock of disciplinarity - with limited in-person engagement, there are foundational disciplinary teaching practices that become limited. I am thinking here specifically of, for example, the Socratic method of teaching, where debate is a central aspect of any philosophy class, which is difficult to do online.

To conclude, my knowledge and own conceptualisation of philosophical disciplinarity is still evolving. For the first time in my career, I am now actively reflecting on my own research practice, but also on how it is translated into my teaching practice.

Jean's shifting perspective on student literacies

I have been employed at my university for 10 years, and I was a student there too. I was appointed as a full-time junior lecturer in philosophy in June 2011 after finishing my MSc in Biochemistry. I am currently a senior lecturer, after the completion of my PhD in Philosophy in 2018. Since the start of my employment I have been led to consider much more closely, in both my research and critical reflection on the scholarship of teaching and learning, the question of student literacies in the attempt to improve my own ways of engaging with students more effectively. This meant not only reflecting on my own teaching and learning philosophy and practices, but also entailed researching best practices in the field. Throughout I have been cognisant of the latest research in the field of philosophy of education, curriculum development and teaching and learning, with the goal of enhancing student literacy as it relates to philosophy. I believe that shifting disciplines (moving from biochemistry to philosophy) sparked an interest into the practices of philosophical knowledge and teaching, and that coming into the field with (arguably) more inexperienced eyes – in comparison to someone who has

come up through the ranks in the same discipline – required me to conceptualise from the ground up how knowledge and teaching in philosophy *works* in practice (not just in terms of theory).

Initially I understood academic literacies mainly in terms of the ways in which students write (or, in contrast, are unable to write) philosophical essays. I thus conceptualised student literacy mainly in terms of student writing, which I considered to be a foundational skill in philosophy due to the nature of engagement with students via their assignments.³⁰ This conceptualisation of student literacy as predominantly relating to student writing (in the context of essays) was due to the tangible problems that I saw in the everyday practice of teaching philosophy – particularly as related to students’ reporting and formulation of their ideas on paper.³¹ Only secondarily did I relate their problems with regard to literacy with the ‘knowing’ and ‘doing’ of the discipline itself, and often I saw problems in this regard as being built on students’ somewhat lacking abilities in terms of essay-writing. I recognised problems concerning epistemological access to the content of the field, but had not yet fully conceptualised how encompassing a challenge this posed to philosophy students in the South African context.

30 I should note here that in a socio-cultural understanding of literacies it is prudent to avoid words like ‘skill’ which generally have very neutral connotations. Instead, I have endeavored to adopt terms like ‘practice’ in my continuing reflection on philosophical literacies.

31 I now recognise that, while I initially posited said problem with the student themselves, it is clear that the alien nature of the knowledge and literacy practices related to Philosophy are more crucial considerations.

After teaching philosophy for a number of years, I began to realise that this initial perspective was very limited (and limiting for my own thoughts on teaching and learning). The change in my thinking began when I started to consider the communities of practice of philosophy itself. I attended a short course, *Writing in the University: Ways of knowing, ways of doing* that reflected on disciplinarity, presented by Kirstin Wilmot and Carol Thomson, which further challenged my initial thinking on philosophical disciplinarity. I read Russell, Littler and Chick (2020), who argue that the recognition and foregrounded explication of discipline-specific literacies in teaching is crucial for integrative learning by students (such teaching also relates to engagement with discipline-specific citation styles). While it is often assumed that students are aware of the academic divisions and structures that underlie such literacies, the authors argue for reconsideration of such a pedagogical assumption (an aspect that I had not considered in detail before the course). Indeed, I now recognise that consideration of contrasting disciplinary practices is crucial for allowing students (and faculty) to navigate multi-disciplinary general education programmes. I could not return to old ways of thinking about disciplinarity in my field of study. In this regard I found particularly interesting and useful the handout developed by Russell, Littler and Chick (2020) (for the humanities, sciences, expressive arts and social sciences) with the purpose of providing insight into teaching and learning disciplinarity, demystifying discipline-specific writing conventions, and to allow for more effective redesign of assignments, courses, and curriculums.

I thus found the idea of engaging with disciplinarity in an overt manner as part of one's teaching and learning to be crucial. I recognised my lack of attention in this regard as being a serious oversight. Indeed, some personal

reflection reveals the issue of disciplinary literacy to be an obvious and key element that needed to be incorporated into my own teaching and learning strategy. Bringing such disciplinary issues to the forefront in philosophy is advantageous for the developing student – allowing them to develop their broader academic voice and to orientate themselves within their discipline and in the multidisciplinary higher education context. The incorporation of discipline-specific literacies into the classroom allows the student to establish a context beyond their studies, advancing and broadening their engagement with their subject matter in productive ways.

Thus, I reconsidered my initial assumptions and looked to incorporate overt disciplinary positioning into my own teaching. In this regard, and in my own context, I have found discussing the varied academic literacies in philosophy important (for example, discussing the split between continental and analytic philosophy that is at issue in this chapter). Often, what is needed is for philosophy students is to be able to map themselves with regard to the debates in their field and broader academic debates. I foresee that further incorporation of these ideas into my teaching-learning strategy would be a crucial step for my own development as a lecturer, and that such a shift will be beneficial for the students whom I teach (particularly, again, in making disciplinary literacies explicit). I also found that, after taking disciplinary positioning seriously, one could begin to create a socially just environment that is supportive of epistemological access in a broader sense.

Findings and discussion

Autoethnography as a method has limitations. The sample is usually very small (in this case, it represents the perspective of two emerging academics).

Furthermore, it exposes the researcher's inner feelings and thoughts, which requires honesty and self-disclosure (Méndez 2013: 282). This also entails that the ethical questions may be very difficult to answer (Méndez 2013: 282). The ethical questions related to this approach revolve around the "emphasis on the self" (Méndez 2013: 282). There are also issues of consent, especially where an autoethnography focuses on sensitive issues involving people around the researcher (Méndez 2013: 283). In this study, however, no sensitive issues or information were identified. This autoethnography focuses on the researchers' professional experience and therefore avoids specific ethical issues pertaining to the consent of others.

What should be evident from the preceding discussion, over and above the fact that the Russell, Littler and Chick (2020) article opened the researchers' eyes to the importance of discipline-specific literacies, is that even in their own praxis there exist vast differences in terms of what would be considered 'philosophical literacy'. Still, the researchers have attempted to find some defining characteristics of what would constitute philosophical literacy. One of the aims of this chapter was to "provide an initial exploration of 'philosophical literacy' in the South African context". While this has been described in the conceptual framework, an appropriate definition of this concept is still lacking. In addition to the above autoethnographic reflections, this paper hopes to contribute a working definition of this concept to address a dearth in the literature. Upon reflection, the authors conceptualised the following key aspects of philosophical literacy as a way to proffer a working definition of philosophical literacy.

Towards philosophical disciplinarity in the South African context

Philosophical literacy as activity

Philosophical literacy must firstly be understood as an event, or a series of events, embedded in a particular socially constructed setting. This follows Wilmot's (2015) description of literacies as socio-cultural events. This socially constructed setting usually relates to academic philosophy as taught in universities, but this does not mean that philosophical literacy is only constructed in one way – rather, it can be actualised in a multiplicity of ways.

Engagement in philosophical activities would be considered evidence of philosophical literacy. These activities are multifarious but usually contain elements of debate, reflection, criticality and the communication of ideas via (mostly) the written word. Involvement in philosophical activities reiterates the idea of philosophical literacy as an activity or event – one learns how to practice philosophy by *practising* philosophy.

Philosophical literacy as understanding the evolution of philosophy

The second aspect of philosophical literacy is understanding the evolution of the 'activity' of philosophy. The activity of philosophy has seen several different iterations over the past two and a half millennia. Philosophers engage with papers and ideas (sometimes many centuries old) that look quite different from what is the norm today. Philosophy must thus be understood as a dynamic activity – not a static one. Indeed, even the analytic/continental divide is a relatively recent occurrence in the field, having only really emerged in the last century or so, and one that may also be in a state of evolution itself.

Philosophical literacy as pluralist

Furthermore, philosophical literacy necessitates understanding the plurality of philosophy – there are many ways in which philosophy can be practised. By embracing the plurality of philosophy, one can make room for African, analytic, and continental literacies to be brought into conversation with one another. Acknowledging and embracing the plurality of philosophy entails the understanding that these literacies might mean different things – there is not only one way of practising philosophy. There is also an element of social justice in this respect – embracing plurality amongst others entails acknowledging and rejecting the sexism and racism that was present in the field for most part of its history. Only through engaging critically with the disciplinarity that is inherently part of the field, can such sexism and racism be countered.

Philosophy as accessible

Philosophical literacy should also aim for epistemological accessibility. Thinking about epistemological access is not only a practical issue, but also a moral one. South Africa is a country with many socio-economic contradictions, and hence epistemological access means different things to different students. There are several reasons why epistemological access takes on a unique iteration in the South African context, which might look different from the issues facing students in the Global North. In order to therefore unpack the issue of epistemological access, one needs to understand the issues facing our students. Thus, understanding the living world of the student becomes a necessary first step before engaging with the student's academic and philosophical literacy.

Philosophical literacy as decolonial

Another rendition of epistemological access is the alienation from the curriculum. Even if students manage to overcome the many practical challenges they face, they might still be confronted with content that is inherently foreign to them. Sadly, it is the case that much of the dominant philosophy curriculum is learning about 'dead white guys'. While a crude typification, the reality is that European or Anglophone thinkers and ideas largely dominate the philosophical curriculum.

It is this exact concern that the #feesmustfall (October 2015) and #rhodesmustfall (March 2015) movements eventually brought to light and which cast the imperative to decolonise the curriculum was cast into the mainstream. It is therefore the case that we must also decolonise the philosophy curriculum. While there is still a long way to go, there are strides being made in this regard - in the authors' own modules, they have made a pertinent effort to foreground the works of African scholars as well as women in their curriculum. In one co-taught module they have endeavoured to demonstrate to students how the Western epistemological project often sets up dualisms (which some thinkers refer to as value dualisms or conceptual oppressive frameworks (see Warren 2000)) and how such thinking can be countered with other epistemes – the module presents decolonisation-in-action.

According to Shay (2016), we must not only hear students' voices but also understand that certain worldviews dominate the curriculum. This means that while the content might be understandable, it is not necessarily accessible. There might be little real-world relevance for students when we

talk about philosophical theories that emanate from 18th Century Europe. Accessibility, therefore, is different from understandability – one can understand a philosophical concept, without being able to access it on a deeper level.

Such issues must be considered carefully and should inform the ways in which philosophy lecturers practise teaching in the classroom. More closely formulated, the problems related to epistemological access must direct our educational paradigms, and must shape the ways in which lecturers integrate the development and support of literacies in the classrooms of our discipline.

Philosophy as embodied

The view of a qualified constructivist teaching philosophy is that students learn best when they are actively engaged in the learning process and in the process integrate new theoretical knowledge with their existing lived and embodied knowledge. We must therefore be aware that our students' embodiment is the manner in which they stand in "a direct and primitive contact with the world", which speaks to the fact that our students are embodied and contextual beings – they arise in specific living conditions with specific cultural and socio-economic backgrounds of which we must be aware (Merleau-Ponty, 1962: vii). The concept of embodiment as a framework for learning means that we understand learning as an active process of constructing knowledge rather than passively receiving it, from the embodied and embedded basis of the student, and that the student enters into this process with a range of presuppositions and ways of understanding things that are based in their lived experience, i.e., impacted by their socio-economic contexts, gender, and race.

A major problem concerning the integration of literacies development and support in the classroom itself is that students have not yet engaged with the broader disciplinary aspects of the field. They generally do not enter the classroom with discipline-specific knowledge, but with their own life-worlds and the knowledge associate with that. Discipline-specific knowledge as a rule is not part of their experiential framework and it is not an aspect of their everyday lives. Indeed, some aspects of philosophical literacies only become important at a more advanced level (in terms of positioning oneself as scholar during one's postgraduate years, for example). The lecturer thus needs to be aware of this gap in the students' experience, and needs to sketch the broader disciplinary aspects for the students to allow a basis upon which they may build further knowledge in relation to philosophical literacy.

From the above, we can proffer the following working definition: *Philosophical literacy is an embodied activity that aims for epistemological accessibility by advancing a plurality of ideas and approaches. Through this epistemological plurality, philosophical literacy addresses social injustices, thereby contributing to the continued evolution of a field that is over two and half thousand years old.*

Recommendations and conclusion

It is crucially important to achieve an understanding of what philosophical literacy is, and how it figures in South African higher education. First and foremost, it relates to initial conceptualisations of literacy as being based in language and the fundamentals of writing (with a number of corresponding challenges and expectations that relate to referencing and plagiarism). However, philosophical literacy extends beyond merely these aspects; it

relates also to the 'knowing' and 'doing' of the discipline of philosophy, which includes discipline-specific standards of argumentation, clarity, and precision (in both the analytic and continental traditions). Baggini and Fosl (2020: 1) summarise the importance of argumentation in philosophy as follows:

"Philosophy addresses some of the most important questions human beings ask themselves. The reason philosophers are nit-pickers is that they are concerned with the way in which beliefs we have about the world either are or are not supported by rational argument."

To remain true to the requirements of philosophical literacy means that these standards should remain central, but also entails that the lecturer should induct the student into the specific knowledge community of philosophy and that the lecturer should strive to construct a socially just environment to support epistemological access (as we have mentioned in our critique sections). Several questions remain unanswered, and open for future reflection: Is a philosophical literacy grounded upon (or based in) a specific epistemology? Does philosophical literacy, or a specific epistemology, come first? And is a plurality of epistemologies (that integrate the analytic, continental, and African) tenable?

Even though the researchers come from different traditions in the discipline of philosophy (and even though it is acknowledged that epistemological access continues to remain a salient problem and that philosophical literacy poses a challenge to their educational paradigms), they find agreement in the fact that the development of literacies and disciplinarity should be of the utmost importance in higher education and that it should be an aspect under continual consideration for the contemporary philosophy lecturer.

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CHAPTER 10:

A holistic, continuous approach to NWU students' academic acculturation: The role of Academic Literacy and the Writing Centre

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Abstract

In this chapter we focus on the development of discipline-specific academic literacies with a sustainable approach towards developing crucial skills beyond the current first-year support. We perceive this challenge as one experienced across South Africa, especially regarding the various levels of academic literacy capabilities of students entering Higher Education (HE). In the chapter, we will, therefore, respond to the issue posed from the perspectives of the support entities, Academic Literacy and the Writing Centre, which work with the various disciplines at the North-West University (NWU).

The chapter first offers an overview of academic literacy in South Africa, followed by a consideration of relevant literature used to develop a (suggested) rudimentary framework for a balanced response to the development of academic literacies. We argue from the perspectives of Academic Literacy and the Writing Centre, whilst focussing on the relevance of what we do and how we tap into the various disciplines to assist NWU students in their academic acculturation and in the acquisition of the necessary skills to write in their disciplines and across disciplines. While doing

so, we shed light on the vital connection between the Writing Centre, Academic Literacy, and the disciplines we support. In addition, we highlight our current roles in the University, where we find ourselves in a space that provides academic writing support to students from various disciplines. The interwovenness of support structures is highlighted, as this leads to the points of discussion regarding responses to the importance of academic literacy support in the continuous academic acculturation of HE students.

Keywords: Academic Literacy, Writing Centre, Disciplinary-Specific, Academic Writing Development, Academic Acculturation

Introduction

When joining a programme in Higher Education Institutions (HEI), students become practising members of an academic community through academic acculturation. The process of academic acculturation can be described in various ways. Still pertinent is the argument made by Van de Poel and Brunfaut (2004), that students need to become members of the academic community through integration or some form of induction. The latter is achieved by acquiring the norms and practices of the academic culture, i.e., becoming “academically literate” (Van de Poel & Brunfaut, 2004, p. 330). This observation can be seen as an augmentation of Hyland’s (2009) statement that students must interact with their community through prevailing academic discourse. The topic of student academic acculturation, from the points of view of successful acculturation or a failure to truly acculturate to the HEI environment, has been discussed at length (both locally and internationally), and researchers agree that the process of academic acculturation is problematic (Bharuthram, 2012; Brinkworth et al., 2009; Darlaston-Jones et al., 2003; Emerson et al., 2015; Leki, 2006; Scott, 2009;

Van Dyk & Coetzee-Van Rooy, 2012; Van Dyk et al., 2013; Van Schalkwyk, 2008; Weideman, 2003).

Students' inability to successfully acculturate to the HEI community, that is, their failure to engage successfully in academic discourse, could lead to a failure to graduate (either resulting in a termination of studies or an extension of time needed to complete a degree). According to the Council on Higher Education [CHE] (2010), 41% of all students enrolled for a three-year degree dropped out before completing their degree. Both Scott et al. (2007) and Scott (2009) confirm these statistics and add to the worrying evidence that 44% of undergraduate students registered for a three-year degree only graduate after five years of study. In an attempt to counter the high dropout rates, many HEI have established interventions (support services and academic development programmes) that address the needs of 'underprepared students' (Alexander et al., 2005; CHE, 2013; Cliff, 2015; McKenna, 2003; Van Dyk et al., 2013).

Van Schalkwyk (2008) states that despite various initiatives to improve the HEI throughput rates, dropout rates continue to rise. The high dropout rates can be attributed to academic illiteracy: that is, students' inability to acculturate to the HEI community, or in layman's terms, students' inability to read and write critically and analytically, to discriminate between fact and opinion, to recognise what is deemed evidence for an argument and to grasp the discourse of the discipline (De Klerk et al., 2006; Van Dyk et al., 2013).

An appropriate approach to address the issue of inadequate academic literacy levels in Higher Education students has yet to be determined. Despite the various initiatives and interventions put in place by the various HEI in

South Africa (including support services and academic development programmes), many students still fail to acculturate to their “new” environment. Against this background, three questions need to be asked: (1) what else should we be doing to support students; (2) how can we improve the various approaches/services/support structures to address the dire situation in South African HE, where students are struggling to complete their degrees; and, (3) what strategies can we develop to create awareness of academic writing development support interventions? To address this problem, we will present a brief overview of academic literacy in South Africa, with a specific focus on the NWU context. This is followed by a short overview of the relevant literature used to develop a rudimentary framework for a balanced response to the development of academic literacies. After that, we will provide a brief overview of NWU Writing Centre (WrCr) theory and praxis. After framing our current academic literacies development context, we will sketch the current initiatives and interventions at the NWU in order to propose a revised approach to assist in students’ academic acculturation and the development of crucial academic writing skills in HE. The importance of the development of an improved strategy to create awareness of NWU writing support interventions, through which the various functions of said interventions are highlighted and explained to all stakeholders, is also explained.

Although we broach the issues to be discussed from the perspective of the North-West University, we firmly believe that our revised approach might be incorporated in HEIs across SA to improve the academic literacy abilities of SA students in general.

Academic Literacy: A brief overview

Defining academic literacy mainly depends on one's position and academic background in relation to this field of study. However, from a pedagogical perspective, Carstens (2012) posits that academic literacy “is about being multiliterate and combining a range of abilities that are conducive for making meaning as well as mediating and negotiating knowledge”. Van Dyk and Van de Poel (2013, p. 46) add to Carstens’ idea and postulate that academic literacy is “more than just being able to read and write”. It is therefore evident that being academically literate includes the ability of students to transfer knowledge and move between the different discourse communities successfully.

When considering the evolution of thoughts and approaches to academic literacy, it is in the work of Bourdieu et al. (1994) that we find the conceptual pillars of this field. Van Schalkwyk (2008, p.11) summarises these as “the role that academic discourse plays in higher education; the ‘linguistic misunderstanding’ resulting from the diversity in our frames of reference; and the notions of power in the academic environment as they exist between student and teacher”. Bourdieu et al. (1994, p. 28) argue that, “Many university students are unable to cope with the technical and scholastic demands made on their use of language...[and] cannot define the terms which they hear in lectures or which they themselves use”. Put differently, students are at odds with the invisible rules and norms of academic discourse, the linguistic challenges these imply, and navigating through power relations in HE. The latter, in our opinion, has less to do with explicit discrimination against students and more to do with prevailing broken lines of communication and the mutual lack of awareness regarding the

expectations of lecturers and students; also problematic is the lack of shared vision amongst university staff.

In connection with Bourdieu et al.'s (1994) aforementioned first conceptual pillar, it is worth noting that students might have difficulties understanding why we use academic discourse, or why it is worth using. This is reflected in our class discussions and evident in the thousands of essays we grade annually. This amalgamation of issues is what literacy developers are continually trying to address. As a result, we have seen multiple paradigm shifts in academic literacy development.

Perhaps the most widely critiqued approach is the “study skills” model (Johl, 2002; Lea & Street, 1998; Warren, 2002). The study skills model focuses on the development of specific skills needed to be “academically literate”. Following this model students are presented *en masse* with remedial lessons/interventions to establish/develop certain academic literacy skills (writing, reading, referencing, structuring an academic text, etc.). However, this model does not allow for discipline specific development, and is therefore viewed by Wingate (2007, p. 398), as a deficit model seeking to “bring about behavioural change in students by providing de-contextualised specialist inputs in a ‘bolt-on’ remedial approach”.

The study skills model was soon followed by the academic socialisation model, where students are inducted into their discipline and its norms. Lea and Street (2000) define this model as offering a student orientation to learning and being concerned with acculturating scholars into the subject's discourse and the different necessary genres. The third model is the “academic literacies” model. This model is closely aligned with the New

Literacy Studies and is, according to Lea and Street (2006), concerned with “meaning making, identity, power, and authority, and foregrounds the institutional nature of what counts as knowledge in any particular academic context” (p. 369).

There has been criticism of all three of the models mentioned above. Still, despite the criticism, academic literacy researchers/practitioners should draw from all three of these models, or, as Wilmot (2015, p.7) states, we need to “play a balancing act between providing the richness of a socio-cultural new literacies approach, and one which incorporates elements of a study skills approach to enable scholars to gain the linguistic tools needed to access academic literacies”.

Given the fact that students from all disciplines need to be academically literate, Lillis and Scott (2007) argue that academic literacy “draws on a number of disciplinary fields and subfields ... [and] it is a field of enquiry with a specific epistemological and ideological stance towards the study of academic communication, and particularly ... writing” (p. 5). Academic literacy can, therefore, be seen as having a transdisciplinary nature, drawing on the following disciplines or areas of research: anthropology, the New Literacy Studies movement, applied and sociolinguistics, as well as systemic functional linguistics (SFL) (writing in particular), literary theory, rhetorical studies, critical discourse studies, communication studies, language and learning, sociology and socio-cultural theories of learning, psychology, and multimodality (Van Dyk & Van de Poel, 2013).

This transdisciplinary nature results in a situation where, as Van Dyk and Van de Poel (2013) postulate, because “research is often conducted by experts in

a specific discipline, for example, history or law, one may not expect that these researchers are necessarily trained in the areas of education or linguistics (the natural academic home of writing), or even interested in the 'language' elements related to their specific disciplines". Van Dyk and Van de Poel's (2013, p.50) point is that there is a "lack of interdisciplinary collaboration with regard to developing theory and responsibly designing practices to enhance academic literacies that will truly benefit students", and this is in our opinion the key problem in successfully assisting students in their academic literacy acquisition process.

A balanced approach to academic literacies development

The researchers believe that the academic literacy movement is, as it now stands, at a critical juncture between what Wilmot (2015, p. 1) refers to as the "autonomous model" and "ideological model". Wilmot (quoting Street, 2003, p. 77) refers to the autonomous model as an approach prioritising "a set of cognitive, technical and neutral skills". This model could be seen as one imposing Western conceptions of academic literacy, because of its prescriptive characteristics. A salient example of this model is the traditional rhetoric course (CTR) commonly practised in the USA from the early 1900s to the 1980s. Here linguistic structures and systems were posed as the central concern of academic writing development. Learners would merely have to acquire these skills (without question) through the mode of rote learning, whilst disregarding the influence of socio-cultural background and their individual and discipline-specific academic voices. This approach is frequently criticised, perhaps too harshly, but one must consider the *zeitgeist* under

which it was developed. Research, now available to the academic community, has unequivocally proven that the approach does not work, especially in countries with a vast array of socio-cultural backgrounds. Because of this fact, in contrast to the autonomous model, Wilmot (2015) proposes the ideological model. In essence, the ideological model posits that literacy is developed through social practices. According to Wilmot (2015), social practice as a concept is rooted in the notion that reading and writing is inexorably linked to conceptions of socially constructed knowledge, identity, and being. Plainly put, students' ability to read and write is embedded in their social backgrounds (worldview/s) and learning needs to tap into this context to be successful.

The ideological model marks a milestone for academic literacies development; however, curriculum developers and teachers constantly balance the choice of strategies that work for their contexts. Consequently, Wilmot (2015) discusses the three aforementioned hierarchical perspectives: the study skills model, academic socialisation model, and academic literacy model. In Wilmot's view, the study skills model perceives the path of academic literacy (as distinct from academic literacies) development as based on language learning, much like CTR. Here, the student is considered to be a vessel filled with knowledge and skills; i.e., involved in internalisation of knowledge and skills through saturation / repetition. The second, the academic socialisation model, views the acculturation process as homogenous, with little regard to deep language, discourse, and literacy issues critical to academic writing. The third, the literacies as social practices model, which takes a "practice over text" approach, is favoured by Wilmot.

The practice over text approach centralises meaning-making, with three considerations:

- Locating conventions in relation to specific and contested traditions of knowledge-making.
- Eliciting writers' perspectives on how such conventions impinge on their meaning-making.
- Exploring alternative ways of meaning-making in academia, not least in considering the resources that writers (scholars) bring to the academy as legitimate tools for meaning-making.

Wilmot's (2015) three considerations could significantly impact the development of academic literacies. Teaching and learning would, in this case, require a significant effort to develop metacognitive abilities because students would not just internalise any given concept, but would also convey academic understanding according to acceptable standards. Therefore, a solid foundation of academic literacy skills needs to be developed. These non-negotiable basic skills presuppose a basic academic vocabulary, grammar, genre, text types, structure, and academic rhetoric.

Academic language acquisition remains a highly contested issue, as Hurst (2015) noted. The HE sector is not yet abreast with the national drive to recognise indigenous languages in teaching and learning, to deal with the failing Basic Education system, and to provide sufficient resources to develop institutional capabilities to accommodate all sociolinguistic backgrounds. To add to this, English has been adopted by the South African industrial complex as the *lingua franca*; further, professional bodies are becoming increasingly concerned with the English language and communication deficit among graduates. Consequently, they are appealing to the HE sectors to improve the

English language competency of students along with the accompanying critical communication skills. Hurst (2015) also recognises that English language proficiency plays a central role in student success. Therefore, given that the Basic Education Sector does not adequately prepare students for higher learning, that industry and the professions require skills development, and that there has been a progressive shift from the autonomous/study skills approach, HE needs to find new avenues for holistic academic literacies development without excluding critical language development.

Building on the notion of an ideological model, Boughey and McKenna (2016) have made a case for the notion of the “decontextualised learner”. For Boughey and McKenna, the autonomous model, still widely practised by academic literacy practitioners, creates many barriers for students across the board, particularly students who lack academic and social capital. These barriers are, for the most part, inadequate language abilities and epistemological understanding to perform complex academic tasks. They argue that students are in many instances so far removed from academic discourse that it becomes virtually impossible for them to make the leap from the social discourse developed in their lifeworld to academic discourse. Academic discourse is, in this context, sketched as a foreign language with rules and norms that must be acquired with little evidence of cultural integration. The situation is exacerbated by the fact that the higher education sector is continually going through substantial challenges to address the shortcomings of their curricula and, as is the case at the NWU, it becomes a mammoth task to adopt an ideological model due to the sheer magnitude of the number of students, and the lack of time, resources and space in

curricula. Another factor often overlooked is the lack of academic literacies development training among subject experts.

What Boughey and McKenna (2016) are suggesting would require that we have more meaningful interaction with students, interaction that leads to a fruitful discussion on complex concepts, both technical and conceptual, and which leads to deep learning. In this regard, Boughey and McKenna (2016, p. 3) do not dispute the fact that language is a central component, but they instead argue for the “language as a resource” model. Here, language becomes a secondary concern – an instrument for the informed learner – and is mainly used to challenge existing notions. Within this context, what becomes central is the development of ideas, followed by developing solid critique and then presenting it in academic discourse. Academic literacies development should, at least in part, become spaces for public discourse, where opportunities are granted to various voices, followed by writing workshops with a range of qualitative feedback strategies. Of course, this is ideal, but what about the students with low literacy levels?

Even though forum-type writing workshops already make for enhanced transformation, there is yet the issue of generic academic literacy approaches to consider. Jacobs (2013) concedes that this is due to the historical development of academic literacy models across institutions, but she argues that we should push the boundaries of contextual appropriateness and feasibility. Essentially, Jacobs argues that institutions should make a concerted effort to develop academic literacy strategies to include disciplinary knowledge. Academic literacy modules commonly teach norms and conventions and their philosophical underpinnings in their generic

form. This could be due to class sizes, institutional position, and because humanities scholars are the primary teachers of academic literacy. Humanities scholars are (usually) trained to teach and understand generic academic writing, not academic writing embedded in disciplines. Therefore, there is the need for interdisciplinary collaboration, which will be discussed later in this chapter.

There are concerted efforts within the NWU academic literacy subject group to include as many discipline-specific writing norms and conventions as possible through consultations with subject-matter experts, treated as discourse partners. Yet, when compared with what Jacobs (2013) would argue is “making explicit for students the principles on what counts as knowledge in disciplines” (p. 132), it also becomes impossible to make “explicit for students the principles through which new knowledge is created” (ibid.). Jacob’s suggestions imply that we find credible ways to prioritise knowledge, especially disciplinary knowledge, over literacy skills and writing. Perhaps this can be done by including disciplinary experts in course and assessment development, inviting these lecturers to class engagements, or developing multimodal materials for reflective exercises. This would most likely improve student engagement because students would discover for themselves the relevance of the skills required to learn a discipline.

Initiatives and interventions to develop students' academic literacy

Being part of an academic community includes joining in its academic discourse while adhering to the various discourse norms of the said academic

community. When students write academic texts, they are expected to communicate with other academic community members clearly, ethically, and in an acceptable manner. Therefore, students are evaluated for their ability to communicate in writing while adhering to the prescribed norms of their specific field of study. Consequently, one could argue that students' success depends on their writing abilities. Given that students entering universities come from different backgrounds and with varying levels of competency, it is of utmost importance that universities have support structures and developmental modules in place, which should assist the student in the academic acculturation process and help develop these crucial academic literacy skills. The notion of supporting students through 1) support services, such as a writing centre, or 2) academic literacy modules is not a new one; in fact, initiatives and interventions through which students' writing abilities are developed have been growing in South Africa over the past 39 years (Parkinson et al., 2008).

Although this support initially took the form of general language proficiency courses (bridging courses), through which students with language inadequacies were supported (Butler, 2007), simply presenting a 'one-size-fits-all' language module was not a successful intervention.

The NWU has not fallen behind in providing academic writing support to its students. Various innovations and developments are focused on supporting and developing students' academic literacy skills. Examples of such support services are the academic literacy modules (presented by the Subject Group, Academic Literacy), three established writing centres, Supplemental Instruction (SI), Peer Mentoring (PM), and library training. This text is focused

on developing a strategy to create awareness of the NWU writing support interventions – WrCr and academic literacy modules – as spaces supporting writing in the various academic disciplines.

Academic Literacy at the NWU

The subject group, Academic Literacy, has a footprint across the three NWU campuses and offers academic literacy modules to all first-year students at the university. The module ALDE/A111 is added on to the credit-bearing programme offering, and is in some instances compulsory (if the student is shown as being ‘at risk’ after the Test of Academic Literacy Levels (TALL) or *Toets van Akademiese Geletterdheidsvlakke* (TAG)), and in other cases it is additional – depending on faculty-specific decisions. The module ALDE/A122 or its equivalent on the Potchefstroom campus (PC), ALDE/A112, is included in the credit-bearing programme offering and is, therefore, compulsory for all students for them to be able to graduate. Academic literacy modules are offered in contact (full-time and part-time) and Open Distance Learners (ODL) modes. More than 12 000 students *per annum* receive academic literacy interventions. TALL for English and TAG for Afrikaans, the property of ICELDA, are used on all three campuses to determine the academic literacy levels of all first-year students (see figure 1).

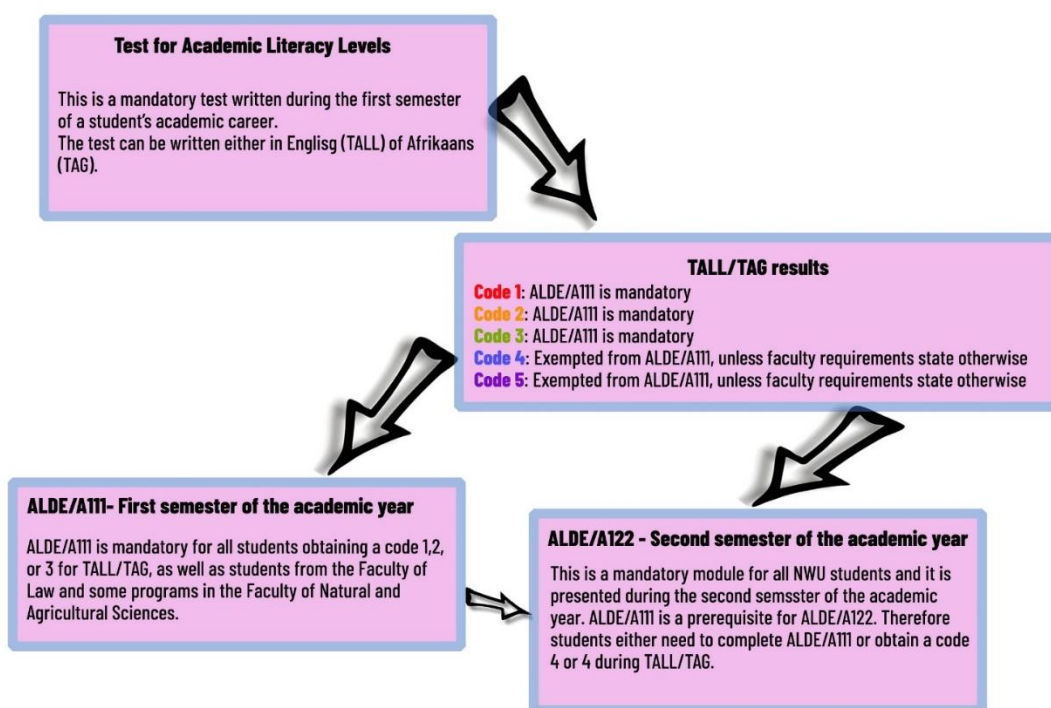


Figure 1: Academic Literacy Modules and placement test

The high reliability and validity measures of this instrument enable us to make confident deductions to practically and functionally support students in completing their studies successfully (Cooper & Van Dyk, 2003; Van Dyk, 2010; Van Dyk et al 2013; Van Dyk & Weideman, 2004a; Van Dyk & Weideman, 2004b; Weideman, 2012). Over several years, the results of the tests have shown that a substantial proportion of students allowed to enrol at NWU are “at-risk” regarding low levels of academic literacy. The first-year students who are shown to be at risk concerning their academic literacy levels need to register for ALDE/A111. Still, all first-year students, irrespective of the result they obtained for the TALL/TAG test (Van Dyk, 2010) at the beginning of the year, must complete ALDE/A 112/122. On the Potchefstroom campus, [PC 112 is confusing] 112 is the compulsory module

presented in the first semester to relieve some of the pressure created by high student numbers, while 122 is offered in the second semester for all three campuses. These two modules are exactly the same.

Students must be exposed to a relevant academic literacy intervention that assists them in completing their studies successfully in as short a time as realistically possible. The Academic Literacy programme provides students with the necessary skills to achieve just that. The academic literacy modules at the NWU (guided by the module outcomes) are made applicable to specific schools/faculties and languages of instruction, keeping in mind the differing needs of students on the different campuses and what will be of optimum benefit to them. Figure 2 illustrates the differences and the interconnectedness between the two academic literacy modules. In essence, both modules address the affordance of academic literacy that can empower students to work effectively with academic texts.

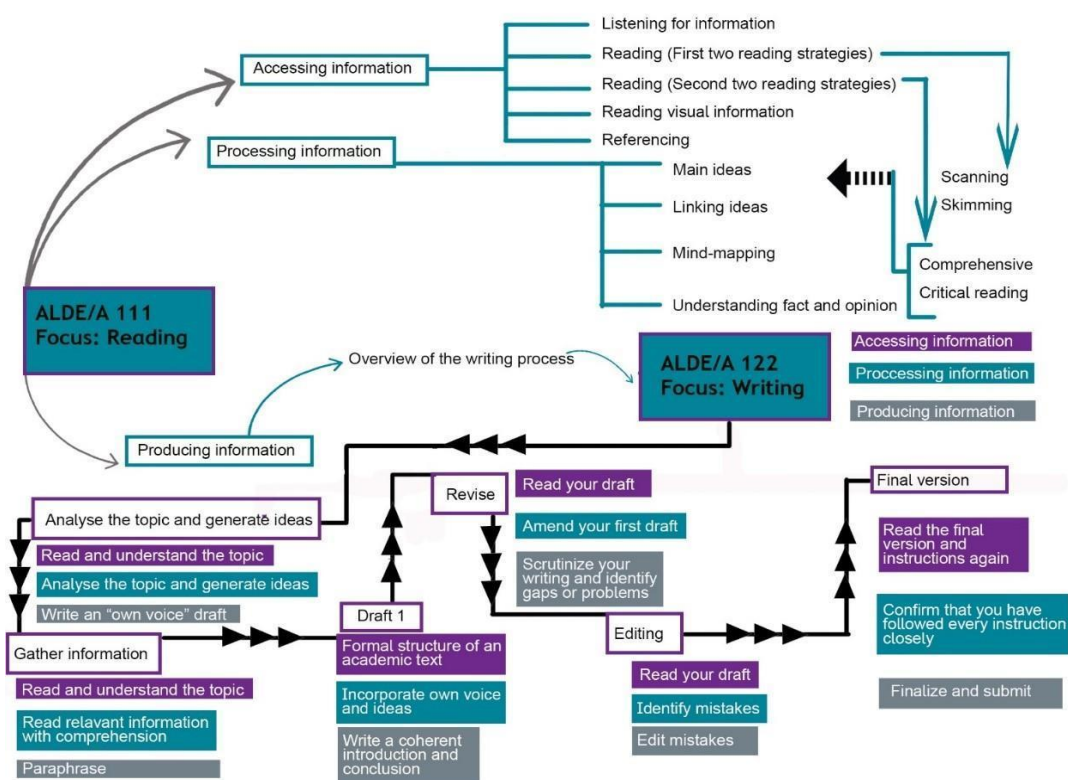


Figure 2: Connectedness of ALDE/A111 and ALDE/A122

The ALDE/A111 module focuses strongly on receptive abilities (concentrates on academic reading: finding and processing information), aiming at developing a range of different, albeit related, abilities and ending with an introduction to academic writing. Conversely, the ALDE/A112/122 module is an integrated writing course (accessing, processing, and producing information).

Writing Centre at the NWU

Writing centres first originated in the United States of America, after which they were also implemented in Europe. The first formal writing centre in South Africa was established at Stellenbosch University (SU) with the help of

Dr Sherifa Daniels (former Director of SU WrCr) and fashioned after the typical model found in the Netherlands. The first NWU WrCr was established in 2009; the NWU WrCr was positioned in the School of Languages, with close ties to the academic literacy subject group.

The NWU WrCr is primarily influenced by Stephen North's (1984) seminal article, *The Idea of the Writing Centre*. According to North's (1984) response to the general misunderstanding of writing centres being fix-it shops, he argued that the ultimate focus of a writing centre should be: "to produce better writers, not better writing" (p. 438). Put differently, WrCr practitioners should not focus on the text, for there are various ethical and pedagogical issues to consider; rather, they should focus on the student (i.e., be student-centric). Regarding academic writing ethics, writing centre consultants – if they work on the text itself – could be considered collaborators, which could potentially contravene the rules of plagiarism (or academic integrity) policies. In addition, when a text is only edited and proofread, there is little impact on the academic writing development of the student.

Writing centres, thus, need people to work together via productive conversation towards lasting academic writing development. To this end, writing centre practitioners (at the NWU) have anchored their work in Lunsford's (1991) notion of collaborative learning, primarily based on the theory of social construction of knowledge. Within this context, the consultant becomes a more experienced conversation partner, with tools to guide the student towards developing academic writing skills. Consequently, the collaborative effort to improve the student's knowledge of the text has a long-term impact on the student's development. Thus, we could say that

North's maxim is the Archimedean point for any given theoretical framework, and Lunsford's notion of collaborative learning defines how writing centres should function.

The basic premise of the writing centre practice is to provide support to an individual who is experiencing difficulties writing an academic text. This presupposes two role players present: an individual seeking assistance and a more experienced individual providing that assistance. The most suitable theory that informs this model is Lev Vygotsky's theory of social constructivism. Vygotsky's theory offers guidelines in the complex setting of the writing consultation session, for he has provided us with the means to understand why we need theoretical guidance and what intervention has a lasting impact. Nordlof (2014), concerning Vygotsky's theory, states that "the typical role of theory within a discipline is to provide a broad explanation of the processes that underlie the surface phenomena that can be observed" (p. 48). In other words, theories provide the "why" to help us understand the "what".

Vygotsky developed the theory of proximal development based on his observations on how children with the help of others performed tasks they could not perform independently. Here, Vygotsky (1978) observed that we learn by interacting with our physical and social environments. He then proposed that the learning of tasks beyond a child's normal limits occurs through social interaction with a more experienced person; there is reciprocity between the learner and the skilled person when examining and performing tasks. This same idea is applied in the WrCr context, where a

more experienced student assists a less experienced student with their writing to develop beyond their initial limitations.

Vygotsky posits that our learning takes place on two levels: actual development and the zone of proximal development. For Vygotsky (1978), actual development signifies the levels of development of the child's mental functions, which have already been established by developmental cycles acquired through previous experience. With the second level, the zone of proximal development, learning takes place with the guidance of a more experienced individual like an older playmate, or a student consultant in the writing centre context. The zone of proximal development implies that children/students have independent and unique problem-solving skills. Still, optimal learning comes through the proxy of a more experienced individual facilitating the development (Vygotsky, 1978). It is also essential to note that students have individual needs when scaffolding is applied to the learning context. Every writer has different levels of proficiency; therefore, every writer needs individualised intervention to help develop complex concepts in academic writing in general and to facilitate these concepts in relation to how they are applied in their fields.

The NWU WrCr environment is built around the idea of individualised service for students according to their specific proficiency levels. Consultations function within a socially curated context based on conversations and demonstrations to promote learning and development. This fact is in keeping with Vygotsky's (1978) notion that "human learning presupposes a specific social nature and a process by which children [or students] grow into the intellectual life of those around them" (p. 39). Writing centres create safe

spaces conducive to academic writing development. Therefore, in terms of in-session activity, consultants preferably focus on students' work to provide concrete guidance within a safe context. This strategy is based on an experiment performed by Vygotsky (1978), confirming that working with concrete exercises the children could associate with stimulated abstract thinking.

Interestingly, at some writing centres, it is taboo for consultants to work with a text provided by the student. At these writing centres the consultant should rather focus on a specific writing skill to be developed. It is believed that this method takes the emphasis away from the text to instead focus on the student's ability to develop skills autonomously. However, in such cases, writing development takes place on an abstract level. Even if relevant exercises are done, these exercises do not necessarily match the discourses of students' subject fields or the intricacies pertaining to their issues. Furthermore, if these exercises are related to relevant subject fields, they most likely do not address students' problems in real time. Most consultants will encounter students who come to the WrCr out of necessity to overcome individual writing problems rather than to develop their writing ability in general.

However, regarding the Vygotskian framework discussed above, there are two main approaches to WrCr consultations: text or student-centred approaches. Text-centred strategies may be beneficial in certain respects, but when focusing on the text, there is a strong possibility that the student's identity and voice will not be prioritised. This is because the text will be interpreted without reasonable input from the student (i.e., two-way

conversations on difficulties experienced during the formulation of a text); furthermore, staying in this mode, one might as well resort to regular text editing and proofreading. Therefore, with reference to points made by North and Lunsford, a student-centred approach is more advantageous for academic writing development in the writing centre environment. With this approach, we become aware of the students' needs and evident abilities and how these relate to the specific text and its context, which the student presents to the consultant. The consultant then uses the text to aid the student in discovering new skills while simultaneously improving the text.

Issues with the current initiatives and interventions at the NWU

As discussed above, we contend that our academic literacy modules and the WrCrS has a reasonably balanced approach in supporting the NWU in academic literacies development. However, some shortcomings are apparent regarding our overall coverage within the Institution. The NWU is currently the second-largest HE institution in South Africa after the University of South Africa (UNISA). Our student numbers range between 60 000-80 000 on an annual basis, of which approximately 11 500 students are enrolled for one (or two) of the academic literacy modules discussed above. This amounts to a ratio of roughly 380 students per academic literacy lecturer. In addition, the WrCr employs between 20-30 student consultants, depending on availability. In total, then, approximately 80 staff members are involved in academic literacies development. Apart from a lack of staff and resources, a lack experienced by writing centres globally (García-Arroyo & Quintana, 2012), there is no clear indication of how many additional academic literacies

development initiatives exist across the institution or in what form they manifest themselves.

Our WrCr aims to provide personalised feedback during the writing process, notably absent in the past. However, again, writing centres across South Africa are notoriously understaffed and underfunded. The root of the problem is that we are positioned in the Faculty of Humanities, under the Director of the School for Languages. At the NWU, this implies that our funding is limited within the faculty budgetary structure. Consequently, we have not been able to appoint consultants for fixed-term contracts, because there is too little financial incentive for non-humanities students to be employed for more extended periods. This inevitably leads to a high turnover rate of consultants, which leads to time and resources spent training consultants on an annual basis.

Closely linked to the issue of scarce resources and difficulties retaining staff, an accurate assessment of our shortcomings must include lack of disciplinary-specific academic writing expertise. Supporting students in their domains requires that consultants be experienced writers in their fields, and that they exhibit, or soon acquire, the more refined academic writing abilities of being able to transfer these skills to others. For these purposes, we always strive to appoint consultants with the best academic credentials, from a range of fields, and representing as many cultural groups as possible.

The nature of these academic literacy modules pose some constraints on their ability to impact the Institution's academic literacy maturity. The primary limitation is that the Faculty of Humanities hosts this module. Students are then only exposed to this module for a maximum of two

semesters (assuming they pass the first time). One might argue that even such limited exposure could have a long-lasting impact, but, realistically (and in most cases), within the limits of one or two semesters only so much can be achieved.

Nevertheless, the academic literacy courses are packed with crucial information to build foundational skills. We start with foundational skills because of the overall literacy levels of students entering university. So in the first semester (or entry-level ALDA/E111), the focus is on developing the fundamental academic vocabulary, getting students accustomed to academic registers, informing them on academic text structures and the philosophy and importance of author attribution. In the second semester, we aim to achieve higher levels of abstraction and some degree of disciplinary-specific training (see figure 2).

Within this context, there are, furthermore, limited opportunities for personalised qualitative feedback. Personalised qualitative feedback is crucial for academic writing development because, as discussed above, the linguistic and social capital with which students enter university is not aligned with the standards required for academic writing in HE. In keeping with “language as a resource”, we approach writing through meaning-making, but as assessments approach, we discover that the technical/formal vocabulary of the students falls short; but more alarming is that the students struggle with logical cohesion and coherence.

Developing crucial writing skills: A revised NWU approach

It is evident from our discussion, especially concerning the complex nature of academic literacy and the need for adequate academic acculturation support, as well as the above-mentioned issues with the current initiatives and interventions at the NWU, that there should be a fundamental shift in how we approach the complex acculturation process first-year students embark upon. Previously (and still for the most part), HE has neglected to consider the myriad factors that influence student learning, including those pertaining to academic literacies. As a result, the needs of students alienated from their life-worlds and other marginalised students have been neglected; the need to improve their language and academic writing skills should be prioritised. As stated in the sections explaining the interventions and initiatives at the NWU (refer to Academic Literacy at the NWU and Writing centre at the NWU), we have already accomplished much regarding our offerings and subsequent support and interventions regarding students. However, when evaluating the initiatives and interventions already instituted, it is clear that we can indeed still improve, especially in terms of our approach to reaching a greater audience whilst improving the quality of our input.

This improvement should be initiated by developing an improved strategy to create awareness of NWU writing support interventions. The various functions of these interventions should be highlighted and explained to all stakeholders. Once a better understanding and awareness of the NWU writing support interventions have been created, we should consider an alternative framework to shape academic literacies development at the

NWU. Active participation from all the faculties would be essential in the creation of such a framework. As informed by relevant literature, we surmise that our alternative approach to the development of academic literacies at the NWU should be based on the following principles:

- The underlying philosophy should be to design a curriculum that recognises a diverse student population, and therein we should seek methods to enhance inclusive engagement (Wilmot, 2015).
- Engagement should be conceptualised to prioritise meaning-making, recognition of identity, critical engagement in power relations, and knowledge-construction politics (Boughey & McKenna, 2016; Jacobs, 2013).
- The generic academic literacy approach should complement a disciplinary approach (Boughey & McKenna, 2016; Jacobs, 2013).
- Language should be developed as a resource for meaning-making (Boughey & McKenna, 2016).

How would one achieve better awareness and implementation of the proposed fundamentals towards an alternative strategy to NWU writing support interventions? Since the subject-group Academic Literacy and the WrCr are situated within the Faculty of Humanities but render services to students from all faculties across the NWU, our first point of departure would be to create awareness of the function and impact of ALDE/A and the WrCr across the NWU. Given the complex nature of the services rendered by ALDE/A and the WrCr, we need to inform all stakeholders of our services and the outcomes of the ALDE/A modules. Although the information regarding ALDE/A is readily available in the various Faculty Yearbooks and on the NWU website, we can assume that neither students nor other stakeholders

genuinely engage with the descriptive content through which our services and purpose are explained.

To counter this, we (ALDE/A and WrCr) need to develop a marketing strategy through which students are made (more) aware of the necessity of the academic literacy modules and the role these modules play in the academic acculturation process. The services provided by the WrCr should also be included in this marketing strategy since the work of the WrCr can be seen as an additional intervention to assist students in the acculturation process.

In addition to making students more aware by creating a better understanding of the purpose of ALDE/A and the WrCr, it is crucial to target and subsequently inform all stakeholders. In addition to the students, top management should better understand our services and the challenges regarding our high student-lecturer ratio. Added to the stakeholders are parents, guardians, and all lecturers at the NWU. Once all these parties understand what we do, how it is done, what is expected from students, and, most importantly, the purpose of ALDE/A and the WrCr, we can move on to the second phase of our alternative strategy.

Another challenge previously mentioned is that there is no clear indication of the number of academic literacies development initiatives across the Institution or in what form they manifest themselves. Although there are

various surveys³², and committees and sub-committees, focussing on student development, alignment and needs analysis – all to eventually develop and improve the NWU's offerings and support to students – the communication on ground level, that is, between faculties/programmes and ALDE/A and the WrCr, is lacking. We as lecturers should work together, rather than trying to support students without reference to any previous modules completed or support given to students. With this in mind, we will analyse all the survey data available mentioned above to improve our joint efforts.

Following the marketing campaign, our next logical step would be to improve communication between the various faculties and ourselves (ALDE/A and the WrCr). Our aim by improving communication is to identify writing-intensive modules or academic literacies development initiatives per programme. This will enable us to liaison with these module owners or individuals in charge of the development initiatives, leading to a collaborative approach to developing students' academic literacy skills.

Once we have identified the writing-intensive modules or academic literacies development initiatives per programme and opened the lines of communication between ourselves and the other faculties (right down to programme-level), we will need to re-evaluate and restructure the ALDE/A modules. As already explained, we differentiate between two different modules, the ALDE/A111 and the ALDE/A122 (or 112) module. While the

32 Institutional Capacity Assessment Tool (ICAT), Siyaphumelela network, Survey for Student Engagement, NWU Student Success Data Plan, Student Teaching and Learning Survey data

ALDE/A111 module is developed with a faculty-specific teaching approach in mind, the ALDE/A122 (and 112) module follows a generic path. These modules are presented as first-year modules, and based on the arguments presented in this chapter, we might be able to reach a more significant number of students if we restructure the modules.

Since the ALDE/A111 module is aimed at more 'at risk' students (those not able to perform in the TAG/TALL), as well as students required to complete this module by their faculties, it seems that a more generic module would better address the needs of these students than our current faculty-specific approach to ALDE/A111. If we were to redesign this module, we could refocus it and structure it as a generic module, presented to students from all faculties where we follow the study skills model and some of the principles from the academic socialisation model.

Combining these two models will allow us to create a foundation on which we could build during the more advanced ALDE/A122 module. Following an approach based on both the study skills and the academic socialisation model (whilst still driving towards the underlying principles of the ideological model), we can focus on the development of skills needed for processing information and the process of producing information, which in turn will enable us to start creating an awareness of acculturating students into the discourse of the subject and the different necessary genres.

Regarding the advanced ALDE/A122 module, a more faculty-specific module in which the academic socialisation and Academic Literacies models are followed could benefit the students. By redesigning the more advanced Academic Literacy module, focussing on the needs of students according to

their faculties and the expectations regarding academic discourse in the various faculties, the overall academic literacy of students could be improved. By shifting the focus and utilising the principles from the academic socialisation and Academic Literacies models in our teaching approach, we will build on existing skills and further develop the students' ability to effectively work with academic discourse.

A significant issue with the ALDE/A modules and academic literacy support is that students only receive support during their first year and are then left to their own devices. In a perfect world, the subject group Academic Literacy should be involved in developing the skills needed to perform well in their academic discourse community throughout a student's undergraduate studies.

If the first two phases (marketing and communication) of the revised approach to academic literacy support were to be a success, it would be possible to approach the lecturers involved in writing-intensive modules at the second and third-year levels. Academic Literacy could then be involved in these modules as well. This proposed involvement should be limited to a supportive function, where the subject specialists in academic literacy assist the subject specialists in the various programmes to develop the students' academic discourse proficiency.

The idea is that an academic literacy lecturer acts as a guest lecturer, focussing on structure, source use and integration, referencing, and elements generally linked with the ALDE/A modules. The subject specialist focuses on content, presentation, and interaction with information from sources. This

collaborative approach would be to the benefit students and would allow us to provide support in the second and third years.

The revised approach to academic literacies development would also allow the WrCr to be better utilised as a supplementary resource. One could, for instance, render the services of the WrCr after identifying problems which need individualised interventions. In doing so, we would establish partnerships between the WrCr and faculties while developing writing skills across disciplines in students. For these purposes, we will improve on previous interventions done in collaboration with the Faculties of Humanities, Engineering, Health Sciences and Law. These interventions supported faculties by supplying consultants for writing-intensive modules. Now, consultants would assist students in previously identified areas of concern by providing one-on-one personalised academic writing support. The WrCr could also increase the number (and sharpen the focus) of workshops for under- and post-graduate students, based on the problems identified while assisting senior students.

We have, here, presented our take on a revised NWU approach to developing crucial writing skills. It should be evident that this approach is hypothetical and that implementing a revised approach would entail far more than what is conveyed by our basic proposition.

Current initiatives to improve our offering

We are well aware that the implementation of the approach, presented above in hypothetical terms, will not necessarily happen in the near future. Given the fact that we want to support our students to the best of our

abilities, and since we are aware of aspects of our existing support initiatives that could be improved, we are constantly finding ways to improve our current services. These include improving our online content, developing video resources in the four official NWU languages, and engaging in continuous efforts to determine how best to assist students.

One of our more recent developments is an eMarking programme. The eMarking programme refers to a development emerging as a means to address our shortcomings in providing thorough feedback. The eMarking system contains pre-formulated feedback compiled by our senior staff members, as well as a dedicated comment section where a lecturer can add specific commentary. This eMarking system then merges the feedback into a personalised feedback document containing the relevant marking scheme with scores and feedback attributed to each category (see Figures 3, 4, and 5 below).

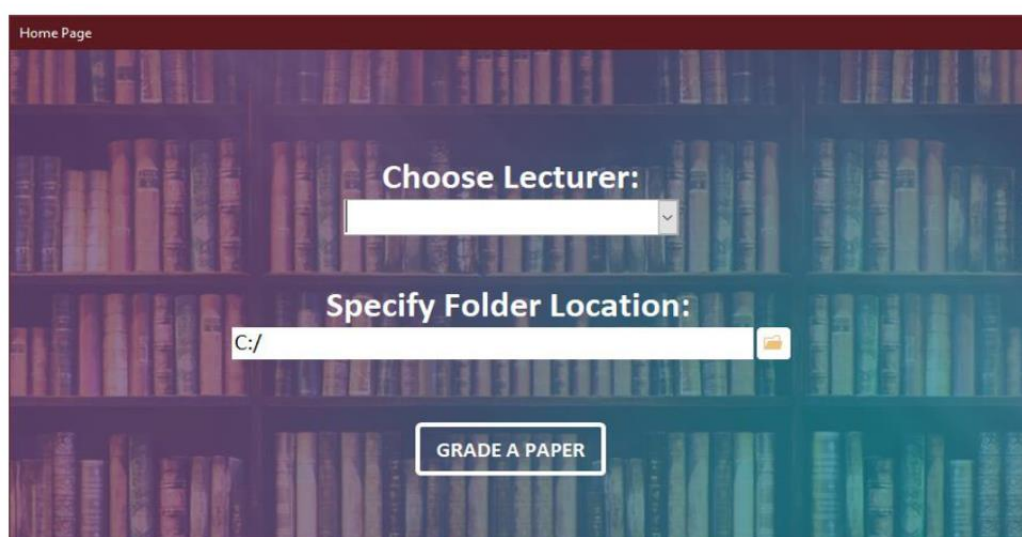


Figure 3: eMarking programme: Home screen

ALDE 122 MARKING PROGRAM

Student Number: Lecturer: Today's Date: **1**

TOTAL MARK: 0 / 50

6 **SUBMIT AND RESET**

INTRODUCTION **DISCUSSION (BODY)** **CONCLUSION** **TEXT REFERENCES** **REFERENCE LIST** **TECHNICAL ASPECTS** **LANGUAGE USAGE**

INTRODUCTION SECTION Mark: 0/5 **3**

Background (context), problem statement, thesis statement, preview of main points of support for thesis

1	2	3	4	5
Most of the essential elements NOT provided, and problems in formulation and/or logical flow	Most of the essential elements provided, but problems in formulation and/or logical flow	Background, problem statement, thesis statement, preview provided, formulation and/or logical flow satisfactory	Background, problem statement, thesis statement, preview provided, formulation and/or logical flow satisfactory	Background, problem statement, thesis statement, preview provided; formulation and logical flow excellent

2 **Additional Comments on Introduction: 5**

4 **Comments on Introduction:**

☐ No preview
☐ Background information not appropriate for essay topic
☐ Formulation of thesis statement problematic
☐ Most of the essential elements NOT provided
☐ Not enough background information
☐ Problem statement not suitable for topic
☐ Remember to use linking devices to help your reader follow the logic of your argument

☐ Preview formulated too broad
☐ Background, problem statement, thesis statement, preview provided, formulation and/or logical flow satisfactory.
☐ Introduction lacks background and/or problem statement and/or preview of main points of discussion
☐ No identifiable introduction – i.e. no problem statement, thesis, preview
☐ Preview problematic
☐ Problem statement provided in the introductory section should be made more explicit
☐ The aims of the essay is not clear

☐ Preview formulated too vague
☐ Essay does not address the topic set for the essay
☐ Introduction should not be divided into numbered subsections
☐ No problem statement
☐ Preview provided in introduction, but does not reflect the correct sequence of sections to follow
☐ Problems in formulation
☐ Try and use the funnel shape as discussed in the workbook.

☐ A good background, problem statement, thesis statement, and preview provided
☐ Formulation and logical flow excellent in the introduction
☐ Introductory section contains problem statement, thesis and preview, but is not identified as "Introduction"
☐ No thesis statement
☐ Preview provided in introduction, but only some of the elements to follow are identified
☐ Problems in the logical flow
☐ You have to identify specific points of support for your thesis in the preview

Figure 4: eMarking programme dashboard

Student Number:
Lecturer: Dr Mariska Nel

ALDE 122: Marking Scheme - Academic Essay						Total	Mark
Introduction:	1	2	3	4	5	5	3
Background (context), problem statement, thesis statement, preview of main points of support for thesis	Most of the essential elements NOT provided, and problems in formulation and/or logical flow	Most of the essential elements provided, but problems in formulation and/or logical flow	Background, problem statement, thesis statement, preview provided, formulation and/or logical flow satisfactory	Background, problem statement, thesis statement, preview provided; formulation and logical flow excellent			
Comments on Background / Contextualization:							
- Not enough background information							
- Providing readers with background on the topic allows them to better understand the issue presented.							
Comments on Problem Statement:							
- Introduction lacks a problem statement. An introduction should clearly state the question to be investigated in the rest of the text. Alternatively, it should make a clear statement that could be defended, explained, or refuted in the text.							
Comments on Thesis Statement:							
- No thesis statement: You must provide a thesis statement (your main argument/ point of view) formulated to align with your focus of discussion and your problem statement.							
Comments on Preview of the Main Points:							
- No preview: Remember, you must include a preview as the last essential element of your introduction. Give it at the end of the introduction, following your thesis statement. Start by saying something like: "In this essay I provide support for this view by discussing the following ..." or "In this essay I focus on the following advantages ...".							
Additional Comments:							
The Fourth Industrial Revolution (4IR), known as the "technological revolution", is the rapid development and advancement of modern technology, replacing traditional industrial ways and manufacturing methods, bringing a greater rise to the digital and technological world. - text reference needed							
It is said that the Fourth Industrial Revolution in South Africa will rapidly increase the unemployment rate, causing a rise in hunger and poverty. - who said this? Text reference needed.							

Figure 5: eMarking programme output file

Even though this is a step in the right direction, we have yet to determine this instrument's impact amongst academic literacy students. We are also

working towards improving our software, adding multimodal feedback through links to videos and guiding materials, with each layer of help designed to catch the students' interest and, most importantly, develop metacognitive skills. The goal is to develop guiding materials that enable student self-reflection regarding their work.

During 2022, we will further refine the eMarking software, especially in relation to the performance data of students and lecturers. At present, we can extract student profiles and intermarker reliability data. However, this data is not yet collated with various other data points such as placements test data (TAG & TALL as referred to above), learning management system data, and student performance data gathered from formal assessments. Therefore, the aim is to develop a system that will be able to collate all the available data to determine risk factors as early as possible. This will allow us to offer remedial interventions before students are at risk of failing the module. Another significant advantage of this system is that it could provide a clearer picture of the acculturation process and provide insight into multilingual language development. Considering all the possible key indicators that might be produced, the researchers would find improved means to move towards discipline-specific academic literacy development.

Conclusion

This chapter presented a brief overview of academic literacy in South Africa, followed by relevant literature used to develop a rudimentary framework for a balanced response to the development of academic literacies. We discussed NWU WrCr theory and praxis, and framed our current academic literacies development context; we also sketched the current initiatives and

interventions at the NWU in order to propose a revised approach to assist in students' academic acculturation as well as the development of crucial academic writing skills in HE. In addition, before detailing the case of NWU academic literacies development and the WrCr, we situated it against a global background through references to relevant literature. This revealed that the NWU is not exceptional in developing academic literacies and WrCrS to enhance the process of acculturation. We also noted that increasing diversity in levels of literacies and backgrounds at the time of entry into university are also among the global concerns that hamper universities' efforts to develop academic literacy skills.

We then focused specifically on the *status quo* of academic literacies development at the NWU, with particular reference to Subject-group Academic literacy and the WrCr. Details of the modules and assessment procedures were highlighted, to outline the efforts by the NWU in supporting students who might not be able to successfully acculturate to the HE community because of a lack of aptitude in academic discourse (threatening their prospects of graduating, or at least graduating within a reasonable time frame).

From both the literature and a survey of the *status quo* of academic literacies and the WrCr at NWU, it was shown that efforts have indeed been made to support students to acculturate. However, a revised NWU approach is now under development, addressing crucial academic writing skills, in line with our suggestions in this article. This will hopefully be implemented in the near future, to deal with the needs of a greater audience whilst improving the quality of our input.

To achieve this goal, the following strategies are suggested: (1) fashion a curriculum that recognises a diverse student population; (2) seek methods to enhance inclusive engagement; (3) conceptualise engagement to prioritise meaning-making; (4) enable recognition of student identity; (5) foster critical engagement on power relations, and the politics of knowledge construction; (6) complement the generic academic literacy programme with a disciplinary approach; and last and not least, (7) develop language abilities as a resource in terms of language being a tool to convey meaning and critical engagement (Boughey & McKenna, 2016; Jacobs, 2013; Russel et al., 2020; Wilmot, 2015).

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CHAPTER 11:

The application of the SOLO Taxonomy for evaluating the cognitive levels of assessment in an introductory Financial Accounting module

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Abstract

There is wide consensus that assessment is critical to the learning process. In terms of introductory financial accounting modules, universities predominantly use the revised Bloom's taxonomy to demonstrate an approximate cognitive demand level for their financial accounting summative assessments. This process remains largely subjective, since the widespread use of a verb to indicate a Bloom level is not particularly suited to financial accounting, where one verb may imply different levels. This pertinent issue, together with a gap in the literature that addresses the issue, led to the primary objective of this chapter, i.e. to provide a framework for the application of the SOLO taxonomy in evaluating the standard of summative assessment of an introductory professional financial accounting module. The research objectives and data (being financial accounting examinations) led to a methodological choice of mixed-methods research, with the qualitative research design being dominant. The qualitative design type is a document analysis specifically set in an interpretative paradigm, mainly relying on the technique of thematic analysis. The quantitative part of the study (that underpins this chapter), utilises content analysis and basic descriptive statistics as part of an overall pragmatic approach. The results of the study

showed that the fundamental concepts of financial accounting (such as recognition, measurement, etc.) as well as the applicable topics (including assets, liabilities, etc.) can be used as a proxy for the cognitive demand induced by the assessment tasks. The combination of these concepts and topics, together with the requirement (or lack thereof) of material relational activity or extended abstract, can then be used to set a SOLO level for an assessment task. The SOLO level of an assessment task may also be materially disrupted (or even set) by the themes of “time allowed”, “layout” or “conventional wisdom”. A framework, which includes examples of assessment tasks as evaluated through the SOLO taxonomy, is given as the final product of the research. This framework will be valuable in enhancing the objectivity of such assessment.

Keywords: Accounting education, assessment, SOLO taxonomy

Introduction and background

There is wide consensus that assessment is a centre pillar of the learning process (Brown, 2001, p. 4). A major reason for assessment's prominence is that it fundamentally affects students' behaviour during the teaching and learning process (Biggs & Tang, 2007, p. 169).

Furthermore, important standard-setting bodies such as the South African Qualifications Authority (SAQA, 2014, pp. 11-12) and the International Accounting Education Standards Board (IAESB, 2019, p. 79) are in agreement as to the importance of assessment as well as the principles underlying good assessment. These principles are summarised as: fairness, validity, reliability, practicability, equity, transparency, and sufficiency within professional accounting education programmes. All these principles can be collectively noted as “credible assessment” (SAQA, 2001, p. 16).

Credibility of assessment is also recognised by higher education institutions (HEIs) in South Africa through their various assessment policies (Central University of Technology [CUT], 2016, p. 3; North-West University [NWU],

2011, p. 1). Review of these policies shows that, in order to aid the implementation of principles of credible assessment, documents are provided to evaluate the assessment tasks itself (CUT, 2016, p. 57; NWU, 2011, p. 1). These documents are typically identified by descriptions such as “Questionnaire on the quality of assessment papers” (CUT, 2016, p. 57), “Moderator’s report” (NWU, 2012) or “Report by external examiner” (University of Zululand [UNIZULU], 2015), etc. It is noted that these reports universally utilise the revised Bloom’s taxonomy (Anderson et al., 2001) to evaluate the appropriateness of the cognitive demands (i.e. the level) of the assessment.

Biggs and Tang (2007) acknowledge that Anderson and Krathwohl’s revision of Bloom’s taxonomy was an improvement, but that it still has some shortcomings such as that under the verbs of “‘understanding’ you can find ‘identify’, ‘discuss’ and ‘explain’, which [can] represent three different [cognitive] levels” (p.80). They therefore advocate their structure of the observed learning outcome (SOLO) taxonomy as an alternative to the revised Bloom’s taxonomy (Biggs & Tang, 2007, p. 80). Ramsden (as cited in Biggs & Tang, 2007) agrees and emphasises the “extraordinary practical utility” (p. xvi) of the SOLO taxonomy and views it as “the assessment apparatus of choice” (p. xvi).

Motivation of the study underpinning the chapter

Researchers typically used Bloom’s taxonomy and the revised Bloom’s taxonomy to evaluate the cognitive level (demand) of learning outcomes, student responses and/or assessment. Examples include Williams’ or Lakshmi’s (as cited in Van Rooyen, 2016, p. 95) work on learning outcomes. It is, however, due to the nature of a Financial Accounting 1 examination, no easy task to evaluate the assessment to determine a level of cognitive

demand required. The major reason for this difficulty in evaluating a Financial Accounting 1 examination's level is that, in line with Biggs and Tang's (2007, p. 80) observation noted above, for an assessment of Financial Accounting 1, verbs that indicate assessment tasks, such as "remember", "apply" or "evaluate", which are usually associated with the revised Bloom's taxonomy, may imply different cognitive demands within a context that can differ significantly for each assessment task, even if the same verb occurs.

Literature (refer below) on the SOLO taxonomy suggested it may well provide a *more* objective and defensible way to evaluate a summative assessment task.

Other research on SOLO

There is a gap in the literature that deals with *all* of i) the SOLO taxonomy, ii) assessment and iii) financial accounting. Therefore, the literature was considered if at least two of these three core components were present in a study. For purposes of relevance, impact and conciseness, the literature found to be closest to the study that underpins this chapter ("this study") in terms of the topic is discussed. None of the scholars, however, focused on the exact topic of this study, although their work was considered as part of the process of meeting the research objectives.

The study by Lucas and Mladenovic (2009) also investigates issues around the topics of SOLO and introductory financial accounting, and is the literature found to be the closest to this study in terms of the topic.

Lucas and Mladenovic (2009, p. 263) point out that they agree with prior research that shows that students under stress tend to revert to a lower level of cognitive response. The experience of the authors, in line with Biggs and Tang (2007, p. 199), shows that the issue of time allowed to complete an assessment task is inherently such a stressor. The time allocation for each

examination's assessment tasks is therefore investigated in the sections below.

Lucas and Mladenovic's (2009, p. 277) overall conclusion is that the understandings evidenced by the majority of introductory financial accounting students may not meet the expectations within higher education and they therefore suggest that there should be interventions to support changes in teaching and learning approaches, including assessment.

The study of Newton and Martin (2013) was found to be second most relevant in terms of this study's topic. The overall results of Newton and Martin's (2013, p. 88) study confirm the relationship between deep learning and improved performance at higher levels of cognitive complexity and that alternative assessment strategies may be valuable tools with which to evaluate learning at increasing levels of cognitive complexity.

Newton and Martin's (2013, p. 88) study also shows that i) examiners, in using SOLO with assessment, should carefully consider the *design of the assessment tasks* so as to accommodate a range of levels of responses as appropriate (Newton & Martin, 2013, p. 88) and ii) that the design of assessments can be used as a tool to encourage students to operate at higher cognitive levels.

Further academic articles indicated a point of saturation in terms of the literature in that they all cover the various iterations of using the SOLO taxonomy to evaluate students' *responses*, students' *learning* or *learning outcomes*.

The context of the study

This study is accepted as being cross-discipline (i.e. accounting and education). It is therefore clarified that the study is concerned with the measuring and aiding of fair and appropriate assessment for a student who is starting an accounting qualification (i.e. for Financial Accounting 1) and that

this qualification is primarily influenced by international accounting standards (currently known as International Financial Reporting Standards or IFRS), professional bodies and government regulations (e.g. SAQA's). Although this study encompasses theory of education as a discipline, the main aim and focus are on financial accounting as a professional discipline within a higher education context.

It should also be mentioned that the term “introductory” in the study's (and chapter's) title refers to a financial accounting module pitched at i) the South African National Qualifications Framework (NQF) level 5 in terms of ii) a financial accounting programme that may typically lead to a professional designation.

Problem statement

The above described background and motivation show: i) the need for credible assessment, as well as ii) the practical utility of the SOLO as a valuable tool of analysis. Although literature strongly supports these notions, there is a clear gap in the literature in that the application of the SOLO taxonomy to evaluate the *level of assessment* of Financial Accounting 1 written examinations (as a form of summative assessment) has not been explored.

As part of the aforementioned, there is also the pertinent issue that for an assessment of Financial Accounting 1, the use of verbs that are associated with the revised Bloom's taxonomy does not readily assist in evaluating the level of such assessment tasks.

The research problem can consequently be summarised by the following questions:

- How can the SOLO taxonomy be applied in order to evaluate the level of assessment of a Financial Accounting 1 summative assessment?

- What are typical themes and their influence on the standard or level of a Financial Accounting 1 summative assessment that can be identified if the SOLO taxonomy is applied as a tool of analysis?

Objectives of the study

Deriving from the research problem and questions, the following objectives have been formulated for the study:

The primary objective of the study is to provide a framework for the application of the SOLO taxonomy in evaluating the standard of summative assessment of a Financial Accounting 1 module.

In order to achieve the primary objective, the following secondary objectives were formulated for the study:

- To document, as part of the proposed framework, typical Financial Accounting 1 summative assessment tasks with analysis through the SOLO taxonomy.
- To determine, by analysis through the SOLO taxonomy, typical themes that have an influence on the standard or level of a Financial Accounting 1 summative assessment.
- To synthesise the insight gained through the study into a framework that can guide the application of the SOLO taxonomy in evaluating the standard of summative assessment of a Financial Accounting 1 module.

On the SOLO taxonomy

Pamela Hook (2015, p. 1), who is a leading authority in classroom teaching in New Zealand, states that the SOLO taxonomy began as an evidence-based model by university academics Biggs and Collis in Australia in the late 1970s (Hook, 2015, p. 6). Biggs and Tang (2007, p.81) confirm that SOLO was based on research of student learning itself, which they see as an advantage over

the Bloom and the revised Bloom's taxonomies. The SOLO taxonomy also features prominently on Biggs' (2022) online blog. Biggs and Tang (2007, p. 21) acknowledge that the SOLO taxonomy is partly rooted in the theory and work of pioneering psychologist Jean Piaget.

The SOLO taxonomy provides a systematic way of describing how a learner's performance grows in complexity when mastering many academic tasks (Biggs & Tang, 2007, p. 76). Biggs and Tang (2007, p. 76) state that the SOLO taxonomy was, among others, built on the premise that "understanding" (i.e. the cognitive process) is something that develops gradually, becoming more structured and articulated as it develops. Biggs and Tang (2007, p. 76) therefore developed SOLO on the premise that as students learn, the outcome of their learning should display increasing structural complexity, and consequently SOLO is structured in levels.

Summarising and synthesising from Biggs and Tang (2007, pp. 77-79) and Hook (2015, p. 5), SOLO's levels are described below. Biggs and Tang (2007, p. 77-79) also suggest some (not all) verbs as words that typically *indicate* (but still needs careful consideration) a level of the SOLO taxonomy and that can aid in determining the level of a learning outcome or assessment task. As explained above, these verbs on their own may still be too generic for evaluating an introductory financial accounting assessment.

- *Pre-structural*: A response that is "missing the point". The response is irrelevant, which shows a lack of understanding. It should be noted that the response can be sophisticated utilising "elaborate tautology", but since it is irrelevant, it misses the point. Hook (2015) summarises this level as one where the "learner" has "no idea" (p.5). *Examples of verbs* (Biggs & Tang, 2007, p. 80): There are no verbs that are specifically linked to this level, since this level points to irrelevant responses and a total lack of understanding.

Further comment: Although it would be surprising to find an assessment task requiring such a response, it is submitted that an assessment task that is not aligned to any stated or implied intended learning outcome (ILO) can be seen as pre-structural since it encourages an irrelevant response in terms of the qualification as a whole.

- *Unistructural:* For this level, the quantity of knowledge required increases, but not the qualitative level of understanding. Responses typically deal with terminology. Responses deal with one concept, superficially and in isolation. Hook (2015) summarises this level as one where the “learner” has “one idea” (p. 5). This level can therefore also be described as being one-dimensional.

Examples of verbs (Biggs & Tang, 2007, p. 80): Identify, define, label, match, name.

Further comment: One should not by default dismiss this level as bad or useless. It may well be appropriate depending on the context of learning, e.g. one needs to memorise a letter in the alphabet before one can differentiate it from other letters.

- *Multi-structural:* Student responses (or the assessment tasks’ required responses) deal with several concepts (i.e. more than one), but which are unrelated. The increase in level is still quantitative in nature. Hook (2015) summarises this level as one where the “learner” has “several ideas” (p. 5). This level can also be described as being two-dimensional.

Examples of verbs (Biggs & Tang, 2007, p. 80): Classify, describe, report, discuss, illustrate, select, narrate.

Further comment: This level is an important building block to the higher levels. Learning outcomes or assessment tasks that are structured around this level can be seen as foundational in nature.

- *Relational*: Biggs and Tang (2007, p. 76) state that the SOLO levels initially increase quantitatively (amount of detail) and then qualitatively (integration of detail into a structural pattern). This level marks the defining point where the qualitative phase becomes paramount. In other words, it is the level where the aim is the *deepening of understanding* as opposed to the mere *increase in knowledge* (Biggs & Tang, 2007, p. 79). In this level, student responses (or the assessment tasks' required responses) deal with several concepts and the response is able to show how these concepts *relate* to each other as well as to a topic as a whole. Hook (2015) summarises this level as one where the "learner" has "related ideas" (p. 5). This level therefore also entails the integration of different subjects' matter, e.g. financial accounting and taxation.

Examples of verbs (Biggs & Tang, 2007, p. 80): Apply, integrate, analyse, explain, predict, conclude, summarise (*précis*), review, make a case, construct, review and rewrite, examine, translate, paraphrase, solve a problem.

Further comment: Since this level deals with at least two concepts and their relation, it can be described as being three-dimensional in nature. An important point in this level is that for a professional discipline such as financial accounting, the ability to relate concepts means that knowledge becomes functioning as opposed to just being declared. Biggs and Tang (2007, p. 73), who note the work of Leinhardt et al. (1995) as well as Entwistle and Entwistle (1997), tellingly state that would-be professionals are trained in universities to label, differentiate, elaborate and justify, when what they need out in the field is to execute, apply and prioritise. This statement suggests another reason why the SOLO level of an assessment needs to be carefully considered.

- *Extended abstract:* According to Biggs and Tang (2007, p. 78), in this level student responses (or the assessment tasks' required responses) go beyond what has been given. The coherent whole is conceptualised at a higher level of abstraction and is applied to new and broader domains. An extended abstract response includes what would be a breakthrough response, giving a perspective that changes what we think. In essence, this level of cognitive demand is the ability to solve the problems not encountered before. Hook (2015) summarises this level as one where the "learner" has "extended ideas" (p. 5) by going beyond the subject and making links to other concepts. This level can therefore also be described as being four-dimensional, since concepts that are new or not obviously related are now also linked to the familiar concepts.

Examples of verbs (Biggs & Tang, 2007, p. 80): theorise, hypothesise, generalise, reflect, generate, create, solve from first principles.

Further comment: This level is valuable in that new knowledge is typically created here and it demonstrates an adaptability towards problem-solving. It shows the ability to deal with the unknown or unforeseen. However, one should guard in over-emphasising this level or considering it to necessarily be of more worth than the other SOLO levels. Biggs and Tang (2007, p. 78) note that today's extended abstract is tomorrow's relational, as new knowledge becomes conventional wisdom. It therefore follows that each person's application of the extended abstract will be different according to their experience and training. The issue in terms of a professional environment such as around financial accounting, is that there is not necessarily the need or resources such as time or funding available to apply extended abstract reasoning. Although it is quite logical that a

professional should be able to think on her feet, one would not want the professional person to reinvent the wheel either.

Biggs and Tang (2007, p. 79) also make it clear that each SOLO level incorporates the previous levels and is therefore a foundation (or scaffold) on which further learning is built (or demonstrated in the case of an assessment). This resonates with a well-known teaching strategy of building on the known to help explain the unknown.

Theoretical framework

In this section the theoretical frame of reference, that guided the study is briefly explained. In light of the research problem and objectives, it can be seen that this study is in essence one of describing “a way” of “how to”. The study is set in an ontological stance of multiple and subjective realities since a solution will be proposed (founded in research), but it is acknowledged that there can be other solutions and interpretations. It is submitted that as long as the study is credible, this stance does not detract from the value of the research.

In line with its ontological stance, the study involves the authors as the main research participants as opposed to being objective observers. This epistemological stance is therefore one of “anti-positivism” (Cohen et al., 2011, p. 6). In terms of this study, the epistemology was further refined as one of “interpretivism”, since documents were analysed and interpreted through the lens of the SOLO taxonomy. It is also clear from the study’s research problem and questions that the data are predominantly qualitative in nature and would be interpreted to obtain meaning. The study was therefore firstly framed in the interpretivist paradigm. It is, however, argued below that a smaller (and secondary) but material part of the study led to the authors eventually drawing on an overarching philosophy of pragmatism.

Pragmatism reconciles the use of a range of methods (e.g. quantitative, qualitative and mixed methods), theories and strategies with the aim of contributing practical solutions that inform future practice (Saunders et al., 2016, p. 143). Therefore, the authors did not wish to limit the possibilities of the research methods and data analysis to the assumptions accepted under the interpretative paradigm, since, i) the study included some quantitative data and ii) the data analysis process of the study (as described below) would entail some quantitative techniques. The quantitative data and analysis were secondary, basic and relatively small in scope, but are important enough so that overall the study was set in the pragmatic paradigm as materially underpinned by the interpretative paradigm.

It can also be seen throughout Biggs and Tang's (2007) work that the SOLO taxonomy is inextricably tied to, and flows from, their theory of constructive alignment (Biggs & Tang, 2007, pp. 50-62). This specific theory therefore also underpins this study.

Methodology

Approach to theory development

The dominant approach for the study was an inductive approach with a secondary abductive approach. The main reason for this is that observations (the studying of the financial accounting exams) were transformed through analysis (which includes interpretation of the assessment tasks in terms of the SOLO taxonomy) into more general themes. At the same time, a small but material secondary deductive approach was also followed, where the themes were considered against the different exams in order to test applicability and to test whether further evidence supports the themes. This secondary process has the benefit of raising the study's validity and credibility. This abductive approach fits with a pragmatic paradigm that frames the study.

Research design

It is acknowledged that the study is primarily qualitative in nature. The data collected, for example, mainly consist of written text in the form of Financial Accounting 1 exams. However, the main reason that the study is considered mixed methods is that the financial accounting exams also state the number of marks and time allowed as numeric (quantitative) data which, although vastly less in scope compared to the textual data (qualitative data), is still useful and entails that the study is one of mixed-methods research. A secondary but important consideration is that during the analytical phase of the study, the technique of quantitative content analysis formed a small but important part of addressing the research questions.

The authors' approach of the qualitative research part of the study being much broader in scope than the quantitative research part is in line with Saunders et al.'s (2016, p. 172) view that under mixed-methods research, the different approaches can be utilised in an unequal way so that one methodology has a dominant role, while the other plays a supporting role as determined by the purpose of the research project.

The quantitative design type for the study is driven by three types of quantitative data. These are: i) the number of marks that each exam question counts; ii) the time allowed per assessment task; and iii) the quantitative data derived from the content analysis process, which can include the amount of time per assessment task or the number of pages of reading material or other frequencies as discovered. The aim was to utilise this limited but potentially influential quantitative data to *support* the qualitative themes emanating. Therefore, the design type that was used entailed basic descriptive statistics. The approach used for the study was (in line with Saunders et al. (2016, p. 527)) focused on the two aspects of description, namely i) the central tendency and ii) the dispersion.

The qualitative design type that was chosen, in light of the study's research questions and data, was the document analysis design type as defined by Bowen (2009, p. 27).

Data collection and analysis

Three techniques to analyse the examinations were applied, being mainly thematic analysis (based on guidance in Bowen (2009, p. 32)), quantitative content analysis (Saunders et al., 2016, p. 608) as well as a form of textual analysis (as per Mouton (2013, p. 167)). De Vos et al.'s (2018, p. 381) useful practical steps concerning the execution of a document analysis were broadly followed. These steps included the formulation of research questions, collection of the documents, data familiarity, coding and analysis.

Target population and sampling frame

The target population comprised final summative financial accounting examinations pitched at NQF level 5 as part of a financial accounting qualification that may eventually lead to any professional accounting designation. This is a typical first-year accounting module, also known as "Financial Accounting 1". A review of the Bachelor's degrees registered with SAQA as specialising in financial accounting confirmed the aforementioned (SAQA, 2017).

These summative examinations are set as those from the 26 public universities (Universities South Africa [USAf], 2020) in South Africa, since i) the authors' experience stems from being employed at a public university, currently the North-West University, and ii) the authors' are aiming the study's contribution toward public universities.

Based on discussions with the custodians (the universities) of these examinations, it was noted that most of them felt more comfortable to provide documents from years prior, primarily since the documents would

then already be in the public domain and no accusations of data leaks could be made against them. They also felt that they could then provide moderated and tested documents that better reflect their assessment practices. In line with an ethical approach, the authors therefore accepted final Financial Accounting 1 examinations from 2016 and from one university who was only prepared to provide 2015's exams. Later on, one university sent a 2018 examination, which was also accepted. The differences between the examinations' ages are not a concern for the study and should not be seen to reduce the validity of the study, since a review (and experience) dictated that foundational financial accounting as a subject stays relatively unchanged in its core concepts (e.g. dealing with debtors, creditors, bank and cash, fixed assets, etc.) and that the findings of the study in terms of the dataset (examinations) and the SOLO taxonomy will be transferable even to newer datasets, because the primary question is one of "how to" apply the SOLO taxonomy in order to evaluate the level of assessment of a Financial Accounting 1 exam.

Sample method

The sample method for the study is firstly categorised as non-probability sampling (Cohen et al., 2011, p. 155) since per the research objectives and design there is no objective that is aimed at statistical generalisability. It is important to note that as is expected from a qualitative inductive approach, inferences and generalisations in terms of broader themes can still be made (Onwuegbuzie & Leach as cited in Cohen et al., 2011, p. 161). For this study, the applicable non-probability sampling method chosen was purposive sampling, since it was decided (to enhance credibility and applicability) to build in a form of representativeness by purposively selecting some of the universities with larger student numbers, as well as universities from different provinces and different types (distance, technology and traditional

contact universities). The study also incorporated a small degree of “convenience sampling” since the sample of universities whose examinations were analysed were based on the universities to which the authors had access (i.e. universities willing to assist).

Sample size

Onwuegbuzie and Leeach’s (as cited in Cohen et al., 2011, p. 162) two main recommendations for a sample of qualitative data were applied to the study. Firstly, a large enough sample was set so that “thick” or “rich” descriptions could be made. Secondly, the sample size was set to achieve data saturation. The aforementioned was based on the authors’ experience as well as a preliminary review noting that the Financial Accounting 1 examinations contain more than one question (assessment task) and are quite descriptive, similar to being mini-case studies and also that the examinations almost universally assess the same fundamental topics (such as debtors, creditors, cash and fixed assets, which indicate a point of data saturation in the sense of accounting topics).

In light of the above, financial accounting summative assessments (exams) of seven universities were analysed. These universities are listed in no particular order and do not correspond to the labels that will be applied in the analysis section of this chapter. The universities were:

- Central University of Technology
- North-West University
- University of the Free State
- University of Johannesburg
- University of South Africa
- University of the Witwatersrand
- University of Zululand

The sample size was sufficient to achieve the research objectives.

The process of coding

The process of coding broadly entailed the following:

- A combination of computer-assisted qualitative data analysis software (CAQDAS) in the form of Atlas.ti as well as a manual process were used to code the data.
- Since the financial accounting examinations follow a very similar and traditional layout (see Figure 1 under theme 2 below), the assessment tasks, which are the “required” part of the examination, were carefully analysed in terms of the SOLO taxonomy, by among other things considering the verbs used in these assessment tasks. The analysis revolved around what the assessment task really demanded in light of the information given and the SOLO taxonomy. The assessment tasks were then labelled under a SOLO level (*a priori* code) together with the type of assessment task (which represented a code derived from the data).
- During the analysis, concepts that seem to pertain to the same phenomenon were grouped under a code that ultimately fed into a theme. De Vos et al. (2018) refer to this process as “discovering categories” (p. 411). These codes were further analysed in light of their effect (or lack of effect) on the SOLO level of the examinations.
- The literature around SOLO (see above) was also used to deduce codes for testing against the data, as well as to induce ideas (observations) and to generate codes or themes that were applicable to the data.

Credibility and validity

For the study, the view was taken that credibility and validity (focusing on transferability and usability) should be considered throughout every phase of the study. The aim was that the study should be of practical use. Reliance was mostly placed on the rigorous description of the research design, context and methods as recommended by Saunders et al. (2016, p. 206). Further examples of where credibility and validity were enhanced include that other scholars' work was considered, that there was careful consideration and framing of the study under accepted philosophical assumptions and the fact that the data of the study were non-reactive.

Ethical foundation of the research

The principle of "do no harm to participants" (Cohen et al., 2011, p. 542) was strictly followed. Even though there was no human participation and the research data were in the public domain, the authors still adhered to the principles of voluntary participation, confidentiality, delinking of data and protection of data. Ethical clearance was obtained for the study that lead to this chapter.

Results, findings, and discussion

At the start of the data analysis process, the content analysis technique was chosen, since it aided the authors in becoming more familiar with the data as well as immediately demonstrating any strange occurrences (e.g. words that one would not necessarily expect in a Financial Accounting 1 examination).

Content analysis applied in support of the thematic analysis

The content analysis was applied as a process of “quantifying” some qualitative data. In terms of the study, it entailed that, at a basic level, the number of times a word occurred (frequency) were analysed. Tables 1 and 2 were the first products of this content analysis with the results discussed below. The second part of the content analysis, namely the “number of pages of reading material”, is incorporated into Table 3, which comprises the quantitative part of the study as was analysed using basic descriptive statistics.

Table 1: An illustration of the word frequency of the examinations

Word	Total	%
year	120	2.56%
statement	96	2.05%
financial	91	1.94%
may	86	1.83%
account	84	1.79%

Table 2: An illustration of the word frequency of the examinations’ assessment tasks

Word	Total	%
prepare	56	2.00%
statement	49	1.75%
marks	47	1.68%
required	42	1.50%
question	40	1.43%

Table 1 was created by importing the seven universities’ Financial Accounting 1 examinations into the Atlas.ti CAQDAS software. The software was then

used to count the number of times a certain word was used. Table 1 is an extract from the full table created by the software and it shows the frequency of each word from highest to lowest, as well as the particular word's frequency as a percentage of the total number of unique words. Although Table 1 visually only provides an extract (as suggested by the Atlas.ti the software), the frequency of all words were considered during analysis.

Table 2 was created following the same procedure and settings as for Table 1, but with the difference that only the assessment tasks as represented by the "Required" part (see Figure 1 under theme 2 below) were imported into Atlas.ti. Tables 1 and 2 therefore also contain some words that overlap such as the word "statement".

The analysis supported by Table 1 was done within the context of the authors' experience as accountants and lecturers. In Table 1, it can be seen that the word "year" is most frequent with months' names, e.g. "May" also being materially used. This is consistent with financial accounting being a period-driven discipline, e.g. yearly reporting. The analysis showed that the exams kept to the topics around financial accounting and did not contain any unexpected occurrences such prevalent spelling mistakes.

Furthermore, it was seen that financial accounting, as expressed through the exams, is concerned with:

- business types (e.g. the words "ltd" or "partnerships")
- financial statements (e.g. the words "statement" or "financial" "position")
- supporting records (e.g. "general" "ledger" or "journal")
- the typical topics or elements found in a financial accounting system. These include "bank" and "cash"; "assets" such as "debtors", "furniture", "equipment" and "inventory"; "liabilities"; "shares" and "capital"; "income", "expenses" and "profit" etc.

The manifestation of these items is not a surprise since they are part and parcel of a typical Financial Accounting 1 curriculum. These items also form part of the fundamental concepts of accounting (as included in the discussion below) and are also found throughout IFRS (International Accounting Standards Board [IASB], 2018).

Moving on to Table 2, the standout word is “prepare”. This is the verb that was materially used (in frequency) to state the assessment tasks, and is not a surprise since it incorporates most of the tasks of a real-life financial account, e.g. preparing the journal entries or financial statements. What Table 2 therefore supports is the research problem, in that it is not easy to use the verb “prepare” to classify a financial accounting assessment task on the revised Bloom’s taxonomy. Other verbs that were used, albeit much less frequently, include “calculate” (19 times), “discuss” (10 times) and “disclose” (once). These verbs have the same implication in terms of the revised Bloom’s taxonomy as “prepare”.

The remaining words that comprise Table 2 share the analysis that was given for Table 1, but it is apt to mention again that the words “question”, “required”, “marks” and “minutes” refer to the layout of the exams (see theme 2 and Figure 1) as well as issues of time and grading.

Based on i) Tables 1 and 2, ii) the review of the exams, and iii) the authors’ experience, it can be seen that the financial accounting exams and the assessment tasks all tie up to what is defined here as the “fundamental concepts of accounting”. IFRSs (IASB, 2018) are also directly structured around these fundamental concepts. These concepts will assist in evaluating the SOLO level of the assessment task (as shown in the sections that follow). The aforementioned process as well as relevant literature (Cloete & Marimuthu, 2015:1; IASB, 2018) brought the following main *concepts* (regarding financial accounting) to the fore:

Financial Accounting being i) a process or system of ii) identifying and gathering, iii) recognising and recording, iv) measuring, v) summarising and classifying, vi) presentation and disclosure of business transactions and financial information that ultimately feed into financial statements that state the business' performance and financial position and that vii) enable interpretation of the above.

Analysis of assessment tasks and the emanating themes

Theme 1: Time allowed for the assessment tasks

The first theme that was immediately obvious as a repeating pattern across all the examinations is the “time allowed for the assessment tasks”, as shown in Table 3.

It was noted above that time stress tends to make students revert to a lower level of cognitive response, which by analogy means that the students may operate at a lower SOLO level than what was intended or expected by the assessment task.

In analysing Table 3, it can be seen that there are differences in the time allocated to the assessment tasks (questions) by the different universities. This is not necessarily wrong or unfair, since there are many other factors influencing the SOLO level. For example, time management in itself may have been an ILO influencing one exam, while it may not have been an ILO for another exam at that moment in the qualification. It can be seen that Universities D, F and G on an overall level allow the least amount of time per mark. It is submitted that Universities D and F compensated for this by having shorter questions that are inherently easier to digest, while University G has less reading material. Furthermore, it can be seen that University E tends to include longer questions, i.e. those that count more marks per question. Longer questions (i.e. more pages of reading material) generally have an effect on time pressure, since students normally have to spend more time to

plan their responses (answers) or spend more time reading. One should, however, be careful to express a view based on this finding that University E's exams are more difficult or better or unfair, since there are many factors to consider (such as the nature of the question or ILO).

The numbers in Table 3 do, however, show that all the universities set their examinations within a reasonable range of time allocated, which is expected, since the examinations are all stated as testing on an NQF 5 level and covering the same financial accounting concepts. A summarised version of the above discussion is given with the final framework below.

Table 3: Analysis of the time allowed for assessment tasks of the sample of financial accounting exams.

	UNIVERSITY A	UNIVERSITY B	UNIVERSITY C	UNIVERSITY D	UNIVERSITY E	UNIVERSITY F	UNIVERSITY G
Total marks	100	100	80	150	160	100	125
Total minutes	180	180	120	180	240	120	150
Minutes per mark	1.8	1.8	1.5	1.2	1.5	1.2	1.2
Total number of pages of reading material	9	6	5	13	15	7	6
Time indicated (or can easily be derived) for sub questions?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of questions and sub-questions*	21	11	10	46	12	14	12
Average marks per sub-question*	4.8	9.1	8.0	3.3	13.3	7.1	10.4
Longest question in terms of marks	17	21	20	16	37	21	27
Shortest question in terms of marks	1	2	2	1	2	1	3

* University A's paper contained 8 x 1-mark multiple-choice questions. University D's paper contained 15 x 2-mark multiple-choice questions. University F's paper contained 5 x 1-mark multiple-choice questions.

Theme 2: The layout of the assessment

Relating to Theme 1 (as explained below), but having distinct implications, is the second theme that was identified as “the layout of the assessment”.

Ambrose and Harris (2005, p. 5) describe layout as the placement of text and image elements within a design. They assert that how these elements are positioned will affect how the content is viewed and received by the readers, as well as their *emotional reaction* towards it. They note that layout can help or hinder the receipt of the information presented in a work, and state that creative layouts can add value and embellishment to a piece, whereas understated layout can allow the content to shine through.

The examinations for Universities A to G are highly similar in terms of layout. Except for relatively minute detail such as font size and font formatting, the layout of all seven universities’ exams is in essence the same. This typical layout is shown in Figure 1 below. One should also note that these examinations are part of the process for students to eventually write the final professional examinations, and therefore these examinations probably seek to simulate the layout of the professional examinations. The explanation given below of the possible effect that layout has on the SOLO level of an assessment task logically explains why a first-year exam may simulate professional examinations in terms of layout.

Question 1	(x marks, x minutes)
Descriptive information / Case study	
Descriptive information / Case study	
Descriptive information / Case study	
Required:	
Assessment task	
Assessment task	

Figure 1: The layout of Universities A to G’s examinations.

To illustrate the effect of layout, the following scenarios serve as an example, which was constructed based on University B’s question 1 (the university and question

were chosen at random) as well as some real-life experience of the authors. At this point going forward, any information pertaining to the year of an exam question (e.g. 2016) was substituted by “20XX” so that the ethical principle of delinking the universities from the data analysis and findings remains adhered to. For the same reason, any organisational names were replaced by for example “A (Pty) Ltd” or “B General Dealers”.

Scenario 1:

The question from University B provides a trial balance and lists 13 points of additional information (i.e. potential adjustments needed) about a partnership.

The assessment task requires: “By taking into account the above adjustments, prepare the statement of profit or loss – including the distribution section – for the year ending on 28 February 20XX in order to comply with IFRS. Ignore VAT”. The question counts 21 marks.

To illustrate the point of this theme succinctly, it is initially accepted that the majority of the marks of the question are on the multi-structural level, since at least two concepts are tested, namely “presentation and disclosure” of the statement of profit or loss, but also the “classification” of the accounts into the correct line item of the statement of profit or loss (the way this scenario is analysed can be further refined by the methods referred to below).

Scenario 2:

The same assessment tasks as given in Scenario 1 apply. The only change is that the trial balance and adjustments are now not given in an unfamiliar layout. The information is given across multiple pages in the format of e-mails, WhatsApp messages and a dialogue between two parties. It is submitted that the majority of the marks now clearly move into the relational level, since the layout of the assessment task in itself is a concept that must now be processed by the student, as the student must relate (categorise) the information correctly before she can even start classifying and disclosing. As the layout of an assessment also influences how a reader reacts to the content of the assessment, it may also have an effect on the time allowed to complete the assessment, since a complex or unfamiliar layout

will require more time for the student to function on the relational level (i.e. more “thinking time” is required). A summarised version of the above discussion is given with the final framework below.

Theme 3: Conventional wisdom

The genesis of this theme is Biggs and Tang’s (2007, p. 78) pertinent statement that “today’s extended abstract is tomorrow’s relational”.

In the South African higher education system, when an assessment task is evaluated in order to categorise it under a Bloom or SOLO level, it is done within the context of an NQF level. What is implied is that a student has had a reasonable amount of effective facilitation, guidance, preparation, access to the necessary resources and other interventions so as to be able to handle a certain NQF level’s requirements. Therefore, examiners, in an environment of constructive alignment and fair assessment, may for example justly evaluate that a particular assessment task is on a multi-structural or relational SOLO level, but the risk is that these conditions (i.e. effective facilitation, guidance, preparation, etc.) may be absent for a certain student, which then has the effect that the SOLO level of that assessment task becomes one of extended abstract for that student. This may typically lead to a mismatch between the intended and perceived standard of the assessment (for that student), which can then lead to a range of unwanted complications such as low grades. Such a scenario also typically has implications for time pressure and mental stress, which may further exacerbate this effect. It is furthermore submitted that this risk is a primary reason why students of financial accounting are constantly encouraged and assisted to study the module content and practise answering problem-based questions. It is also one of the main reasons that continuous assessment is applied before the summative assessment.

This theme will now be demonstrated with a scenario from one of the financial accounting examinations to support the above explanation (the university and question were randomly chosen):

Scenario and discussion:

The question from University G provides half a page of information about a company that manufactures plastic bottles and sells them to various water retailers.

The assessment task requires: “Using the five-step model of IFRS 15, discuss with reasons the recognition of revenue from the contract with G (Pty) Ltd. Assume that the agreement between G (Pty) Ltd and Z (Pty) Ltd satisfies the requirements of step 1 of IFRS 15.” The question counts 6 marks.

The authors’ experience dictates (and most financial accounting lecturers should concur) that this is a classic Financial Accounting 1 assessment task, which entails the listing of rules and the relation or application of the given information to the rules while ultimately concluding with an answer. Even though the word “relating” is used, this does not place the assessment task on the relational SOLO level. If one analyses the assessment task by also taking into account the concepts of financial accounting, the task actually entails two broad elements, which are i) “recognising and recording” of ii) one standalone topic that is either sales or revenue. The task is therefore seen as multi-structural *if* a student has for example seen it before, has practised it, or has previously been guided on a similar task. In this instance, there will be little relational aspect (which does not mean it is a “bad” or invalid task). The reason for this is that typically a student would list the five rules (in this case of IFRS 15) and then scan for the typical “sales contract” information and list that under each item of the first list. Had the assessment task brought in an element of another topic, for example taxation or inventory, then the task will probably be on the relational SOLO level, since then the task will require more than an “autopilot” response. It is also interesting to see above that the first step of the assessment task is given, for which there may be a few reasons, but ultimately it may be understandable since it is an introductory financial accounting examination.

However, if for example the nature of the topic (i.e. IFRS 15 Revenue from Contracts with Customers) is new (as was indeed the case when this exam took place) and students, facilitators or even examiners have not had much chance to develop relative conventional wisdom over the topic, then the assessment task becomes clearly relational in terms of SOLO. This is because the student will now have to

process each part of the given information carefully and relate it to the correct step in the list for revenue recognition. If a student for some reason missed the IFRS 15 lecture and had no other effective facilitation or study guidance, then the whole assessment task may become an extended abstract for that student, that combined with time pressure and mental stress, will likely lead to failure. Admittedly, this theme involves a degree of professional judgement from the examiner, since the examiner, while regarding the best available information, will have to make a call on the extent and effect of “conventional wisdom” on the particular assessment task. The aim is, however, one of *more* objectively measuring the level (or standard) of a summative assessment and not claiming to find a *fully* objective method. A summarised version of the above discussion is given with the final framework below.

Reflecting on Themes 1 to 3

The common thread that can be seen in the explanation of these three themes is that they are more likely to change (or “disrupt”) a SOLO level of an assessment task than to set it. Of course, they can sometimes help to set a SOLO level, for example where the time pressure or layout is an ILO to be assessed in itself or where students are purposely required to function on an extended abstract level through the design of an assessment that is clearly beyond “conventional wisdom”. However, in general, the implication is that in most cases a SOLO level will be set (as explained in Theme 4 below) after which the impact of Themes 1 to 3 should be considered. Themes 1 to 3 can therefore be further categorised as the “disruptor themes”.

The issue found with the analysis applied under Themes 1 to 3 is that it was not yet a structured process that is geared to set an initial SOLO level for an assessment task.

Therefore, drawing on experience, the review of the data, analysing how the process can be better structured, as well as considering all the information given in the study up to this point, Theme 4 was formalised, which is termed the

“dimensional method of applying the SOLO taxonomy to the assessment tasks of Financial Accounting 1”.

Theme 4: The “dimensional method” of applying SOLO to the Financial Accounting 1 examinations’ assessment tasks

What the authors realised in utilising the SOLO taxonomy is that the notion of *cognitive demand induced by the assessment tasks* is central. This realisation agrees with Biggs and Tang’s (2007) observation that “good teaching is getting most students to use the level of *cognitive processes* needed to achieve the intended outcomes that the more academic students use spontaneously” (p. 11).

The SOLO taxonomy is a proxy of cognitive demand with the suggested way to set the SOLO level to find the verb (e.g. “apply”) of an ILO or student response. However, with the verbs not being a practical option in terms of Financial Accounting 1 assessments, another credible way to set the SOLO level for the financial accounting assessment tasks had to be found.

During the analysis process, it was realised that the following “elements” could provide a “dimension” that can link the assessment task efficiently to the SOLO taxonomy.

The elements to consider were found by asking “what is it that this assessment task requires the students to process cognitively?”

The main *elements* were found to be:

- The fundamental *concepts* of financial accounting that an assessment task requires (e.g. recording or classification or reporting, etc.).
- The *topics* of financial accounting that are involved, e.g. bank and cash or inventory, etc. These topics would for example be derived from the ILOs that constitute the curriculum.

Examiners should note that this process is not a mechanical positivist process. They should use their experience and judgement to, among other things, interpret what constitutes a “topic”, since it may for example be possible to divide a topic into even smaller topics. The overriding question remains “what is it that this assessment task requires the students to process cognitively?” Experience dictates that a collection

of ILOs, as found in a study unit (SU) would most likely constitute a topic, which can then be taken as an element of *material* cognitive demand. The word “material” is understood as something that makes a difference, i.e. something exceeding the trivial.

Linking these elements (*concepts* and *topics*) to the SOLO taxonomy can be done as follows:

- If an assessment task requires and awards an irrelevant response it is set as being on the pre-structural level. Such an assessment task will not be seen as credible or fair.
- If an assessment task only requires the cognitive processing of any one element (i.e. fundamental concept or topic), it is set as being one-dimensional and on the unistructural level.
- If an assessment task requires the material cognitive processing of two or more elements, but does not require relational activity between these elements, the assessment task is set as being two-dimensional or on the multi-structural level.
- If an assessment task requires the material cognitive processing of two or more elements and also requires material relational activity between these elements, the assessment task is set as being three-dimensional or on the relational level. “Material relational activity” means that the assessment task requires the integration of detail into a structural pattern, as opposed to requiring the mere increase in quantity of detail.
- If an assessment task that requires the material cognitive processing of i) two or more elements as well as ii) material relational activity between these elements, but also iii) the conceptualisation of responses to go beyond the given information as well as go beyond what can reasonably and contextually be expected as at least partly conventional wisdom, then the assessment task is set as being four-dimensional or on the extended abstract level.

One may ask why the term “dimensional” is used above. The reason is that it was found that it becomes easier to think of assessment tasks in terms of dimensions (2D vs 3D vs 4D). A three-dimensional question has “depth” (a relational aspect) and a four-dimensional question ventures into the unknown (“fourth dimension”). It is furthermore noted that the utilisation of verbs should not be totally discarded, since they may still assist, for example, in whether to decide which fundamental concepts of accounting are required by an assessment task. Similar to the current practice of universities to link assessment tasks to the revised Bloom’s taxonomy by using the number of marks (CUT, 2016, p. 57; NWU, 2011, p. 1 as examples), the “dimensional method” also uses the number of marks for analysis purposes where one stated assessment task may imply different SOLO levels.

The following examples illustrate the application of the “dimensional method”.

Example 1: Trial balance with adjustments

Examination: University A

Brief description of the scenario: The question provides a trial balance and lists ten points of additional information (including adjustments needed). The business has the form of a sole proprietorship. The overall “required” part is divided into two assessment tasks, of which number 1 is discussed here.

Assessment task: “Prepare the statement of profit or loss and other comprehensive income for the year ended 31 December 20XX.” The question counts 14 marks.

Analysis through SOLO: Since the assessment task requires the adjustment of the given information (the *concept* of “summarising and classifying”) as well as the preparation of a financial statement (“presentation and disclosure”) dealing mainly with the *topics* of income/expenses and assets (depreciation calculations), it can be seen that at least three *elements* are present. Since all 14 marks are awarded for amounts that needed adjustment, the initial reaction would be to consider the whole task as being on the relational level, since adjustments need to be related to the amounts. However, of these adjustments, eight marks i) do not require *material* relational activity, since they comprise simple straightforward calculations (e.g. 65 500 + 7 800) which are ii) considered conventional wisdom within the context of

Financial Accounting 1. Therefore, the assessment task is set as having six marks (43%) on the relational SOLO level (or 3D level) and eight marks (57%) on the multi-structural SOLO level (or 2D level).

Variations and other occurrences: The “Trial balance and adjustment” type question was found to be most prevalent, including those with minor variations, e.g. requiring a different financial statement (Universities D and F) or having a different business form (Universities A, B, C, D, F), or requiring accounting records such as the general ledger or journal entries (University F). The other business forms were found to be partnerships (Universities A, B, C, D) and clubs (Universities C and F). The business form of companies was found to rather fit into example 2, which is given separately since it is considered to be a major variation of this example. Some examinations had more than one of these types of questions. The analysis process would, however, follow the same logic as this example.

Example 2: Trial balance with adjustments and material integration of topics

Examination: University E

Brief description of the scenario: The question provides an extract from a trial balance and lists 20 points of additional information. The additional information covers basic adjustments needed, but also provides significant detail about various topics such as share capital, debentures, taxation and dividends. The business has the form of a company. The overall “required” part is divided into four assessment tasks, of which number 2 is discussed here.

Assessment task: “Prepare the statement of profit or loss and other comprehensive income for the year ended 30 September 20XX, starting from the profit before tax and finance costs figure which was calculated in 1 above.” The question counts 13 marks.

Analysis through SOLO: The assessment task comprises more than two *elements* (similar to example 1) as well as some relational aspects. There is, however, no requirement to address anything clearly beyond i) the given information together with ii) beyond what can reasonably and contextually be expected as being at least partly conventional wisdom. Therefore, the assessment task cannot be set on the

extended abstract level. The calculation of the finance costs is a calculation that is not straightforward conventional wisdom, since the concept time value of money is involved (this counts six marks). The remaining summarising of the given information into the financial statement is either done directly from the given information, or is based on straightforward basic calculations (this represents seven marks). Therefore, the assessment task is set as having six marks (46%) on the relational SOLO level (or 3D level) and seven marks (54%) on the multi-structural SOLO level (or 2D level). Due to the relative length of the given information as well as a layout that seems different to those seen in example 1 above, the examiners and moderators should consider whether “time pressure” and “layout” do not raise at least some of the marks to a higher SOLO level. This will depend on the “conventional wisdom” for the programme’s students, which, as experience dictates, should be fairly high (i.e. they would have seen such a layout and question before). This would then mean that the set SOLO levels are not disrupted.

Variations and other occurrences: University G had a similar type of question with the variation that the statement of changes in equity was required, while University B required both the statement of profit or loss and other comprehensive income as well as the statement of changes in equity.

About journal entries and general ledger accounts

Journal entries and general ledger accounts are accounting activities (typically involving recognition and measurement) that are a means to an end. The “end” being the financial statements. Therefore, the same logic as the examples above would apply to evaluating the SOLO level of an assessment task requiring journal entries of general ledger accounts. Journal entries were required in the examination of Universities A, B, D and G, while general ledger accounts were required by Universities A, D and F.

Other examples

During the research, other typical assessment tasks that were found were the “Disclosure of notes to the financial statements”, “Theory and apply type

questions”, “Cash flow statement”, “Bank reconciliation” and “Financial ratios”. While the dimensional method was successfully applied to these examples by using the principles illustrated above, these examples are for the sake of conciseness not repeated here.

Reflecting on Theme 4

During the analysis given under Theme 4 above, the following observations were also made.

No instances of pre-structural questions were found at all. This is to be expected in a professional environment such as an accounting school, but is still gratifying to see. Only two unistructural questions were found, which counted seven marks. These unistructural questions may, however, have been used to balance the level of the paper or time pressure. No examples of extended abstract questions were seen, which also makes sense in light of the fact that the examinations were pitched at NQF 5 (introductory level). The questions were found to generally be pitched at around +60% on the multi-structural level, with the majority of the remaining marks being on the relational level. It was also noted that none of the examinations covered the typical higher level topics such as consolidated group financial statements, which is in line with the authors’ experience of the typical financial accounting ILOs at NQF 5. All in all, the examinations were perceived to be professionally prepared and aligned to the typical financial accounting ILOs. In time and by practising the “dimensional method”, examiners will likely be able to quickly state an assessment task as being 1D/2D/3D or 4D in nature.

Recommendations and conclusion

The study’s research problem was solved by iteratively achieving the study’s secondary research objectives, which fed into and achieved the primary research objective, as well as solving the research questions. The secondary research objectives as achieved in the various sections of this chapter culminate into the coherent framework given below. The authors believe that this framework will be

invaluable in enhancing the objectivity of evaluating the cognitive levels of assessment in an introductory financial accounting module.

Framework for the application of the SOLO Taxonomy in evaluating the level of introductory Financial Accounting assessments

The aim of this framework is to provide guidance for the application of the SOLO taxonomy in evaluating the standard of a summative assessment of a Financial Accounting 1 (introductory financial accounting) module. The framework is informed by research with the main aim of having practical utility. The framework is not meant to be prescriptive, but rather to illuminate or assist. Examiners and moderators are encouraged to use their experience and judgement to consider contextual issues and to not merely follow a mechanical process. The sections that follow each addresses a significant specific theme of guidance.

Time allowed to complete assessment tasks

Time pressure has an impact on a student's cognitive response, and therefore examiners must carefully contemplate whether an assessment task is to test time management skills, reading skills, planning skills, the concepts of financial accounting, or all of these as well as to what degree. Examiners must be careful that time pressure does not inadvertently frustrate the SOLO level that the assessment task aims for the students to operate at.

The layout of the assessment

A layout that students perceive as unfamiliar or complex can have the effect of raising the SOLO level (which may be desired or not) of the assessment task for that student, since the effect of the layout of the examination in itself then becomes a concept to cognitively process along with the other requirements of the assessment task. A complex or unfamiliar layout will also affect the time allowed to complete an assessment, since such a layout will require more time of the student in order to function on the relational SOLO level (i.e. more "thinking time" is required).

The effect of “conventional wisdom”:

Conventional wisdom or the lack thereof may raise or lower an assessment task’s SOLO level. Examiners, in an environment of constructive alignment and fair assessment, may for example rightfully evaluate that a particular assessment task is on the multi-structural or relational SOLO level while there is a risk that these conditions (i.e. effective facilitation, guidance, preparation, etc.) may be absent for a certain student. This could have the effect that the SOLO level of that assessment task then becomes one of extended abstract for that student. The recommendation of this theme is therefore, that an examiner should, while regarding the best available information, consider how much conventional wisdom a well-prepared student (i.e. the “reasonable man” test) should possess in terms of a certain assessment task. The examiner should then consider the effect of the conventional wisdom on the SOLO level of an assessment.

The “dimensional method” of applying SOLO to the Financial Accounting 1 examinations’ assessment tasks

This method was developed as a more structured and formalised way of applying SOLO to the Financial Accounting 1 examinations’ assessment tasks since themes of “time allowed”, “layout” and “conventional wisdom” were found to be more likely to change (or “disrupt”) a SOLO level of an assessment task than to set it. The “dimensional method” is a cornerstone of this framework and is thoroughly described (including examples) under the “results, findings and discussion” section of the chapter above.

Limitations of the study that underpins this chapter

The main limitations firstly include that there is a degree of subjectivity in the data analysis, since the authors alone coded the data. To compensate for this limitation, the data analysis and findings were richly and transparently described in order to demonstrate logic and the lack of undue bias. The authors also point to their vast experience to demonstrate their expertise in relation to Financial Accounting 1 examinations. Secondly, the study utilises data that are bound to a snapshot in time

which, if the nature of financial accounting examinations changes fundamentally, will render the study outdated. Currently, there is no indication that Financial Accounting 1 summative examinations will change materially from the data that the study used and the findings will therefore be relevant for the foreseeable future. The final framework is, however, also suited to future modification.

Areas for further research

It follows that the study (and subsequent chapters) may be extended to the assessment of financial accounting under higher NQF levels or other subject disciplines, while a study that compares students' perception of the cognitive demands of a financial accounting exam against the findings of the application of the above framework, may show some interesting perspectives.

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CHAPTER 12:

Exploring tutor engagement in responding to students' needs through Care-full, Online, Formative Feedback

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Abstract

The COVID-19 disruption in higher education (HE) necessitated a rapid migration to emergency remote teaching. The transition to online learning and its dependence on technological resources and connectivity posed a challenge to equitable opportunities for student access, engagement and support. Blended learning courses, based on sound pedagogical principles were in a stronger position to make this transition to online learning as students were used to the technology and had been inducted into processes of providing online feedback. This chapter is based on research which explores tutors' involvement in providing online formative feedback to enhance student academic literacies and epistemological access within a remote context. The study approaches issues of social justice and equity through a political ethics of care lens. Furthermore, the study highlights the relevance of care-full and attentive formative feedback and pedagogy within an unstable, remote teaching and learning (T&L) context. It draws on research conducted between 2018 and 2019, supplemented by recent collaborative reflections on tutor practices of engaging students in feedback. The chapters explores the following: development of student academic literacies through online tutor feedback on formative

assessment tasks. It focuses on tutor capacity to provide online feedback; the building of tutor and student feedback literacy and developing the social and emotional environment for feedback. It was found that the structured support which was embedded in the course, using a blended learning approach, enabled continuity of support and learning during the COVID-19 lockdown. Insights from this research can inform policy and practice which enhance social justice through the development of students' academic literacies in an integrated way within remote and blended learning contexts.

Keywords: COVID-19, online feedback, tutors, political ethics of care, writing centres, emergency remote learning

Introduction and background

Within the context of the disruption brought on by COVID-19 and the rapid transition to remote online learning, this chapter explores how the development of student academic literacies were enhanced through supportive online feedback on formative assessment tasks. Drawing on Tronto's (2013) political ethics of care, tutors' involvement in providing online, formative feedback to students in a B.Ed Honours course at the University of the Western Cape (UWC) is explored.

The authors' approach to formative feedback within the context of a carefully designed assessment strategy draws on a tradition which values dialogical feedback and focuses on enhancing students' agency and capacity to take up and apply feedback in subsequent tasks (Boud & Molloy, 2013; Bozalek, Mitchell, Dison & Alperstein, 2016; van Den Berg, Collett, Verster, 2019). The course assessment consisted of a series of nested tasks, on which writing centre tutors provided regular feedback, which built up to a more complex summative task. Providing opportunities for students to respond to feedback enabled a dialogical engagement between students and tutors. This was informed by Tronto's political ethics of care (Tronto, 1993, 2013) which has been drawn on as a normative framework for informing dialogical feedback (Bozalek et al., 2016; Dison, 2018).

While much has been written about feedback in the South African writing centre literature (Deyi, 2011), there is limited research on the role that writing centre

tutors can play in providing feedback in disciplinary courses (Collett & Dison, 2019). Furthermore, the role of technology in supporting formative feedback has received limited attention in the South African context (Collett & Dison, 2019; van Den Berg et al., 2018;).

The university lockdown necessitated by the COVID-19 pandemic required that the B.Ed Honours course rapidly migrate to remote online teaching in order to provide a continuity of support and care for teaching and learning. Using Tronto's (1993, 2013) phases of care and corresponding moral elements, this chapter reflects on tutors' engagement with the students within the context of the course curriculum. It is argued that tutors can play a valuable role in providing care for students and facilitating their development of academic literacies. Furthermore, Tronto's political ethics of care (Tronto, 1993, 2013) is drawn on to conceptualise the moral and pedagogical practices which can support the social, emotional and cognitive dimensions that enable giving and receiving of feedback.

This chapter contributes to higher education (HE) and teacher education research through its exploration of care-full and attentive (Bozalek & Zembylas, 2017) online formative feedback by tutors. Care-full and attentive feedback embraces the principles of an ethics of care (Tronto, 1993, 2013). Insights from this research can inform policy and practice which enhances social justice pedagogy within remote and blended learning contexts.

The study arises from an ongoing collaborative process initiated by an Education lecturer, and staff from the Writing Centre, in relation to Honours courses in Leadership and Management in Education. This started in the pre-COVID era in 2017 and was sustained during the COVID lockdown through the use of technology.

Problem Statement

There is consensus in the literature (Boud and Molloy, 2013; Carless and Boud, 2017; Clarence, Quinn and Vorster, 2015;) that systems of student feedback and

assessment in Higher Education Institutions (HEI's) are inadequate and require improvement.

Before the COVID-19 lockdown the lecturer noted that there was a gap in academic literacy support to honours level part-time students. This gap in support was related to inadequate curriculum strategies focusing on embedding the development of the academic literacies in the course design (Clarence, 2010; Dison & Moore, 2019). In addition, the students were unable to gain physical access to tutors at the Writing Centre during working hours. In order to address this, a collaborative strategy was developed for the provision of support to the lecturer to embed the development of academic literacies in her course design and assessment strategies (Carless & Boud, 2017; Dison & Moore, 2019). Furthermore, a focus was placed on the provision of online feedback by Writing Centre tutors. There was a need for a process of ongoing collaborative reflection and research in order to learn from the design and implementation of the intervention.

Research aims and objectives

The research aimed to explore a collaborative intervention between an Education Faculty lecturer and Writing Centre staff to embed the development of academic literacies including formative online feedback into a course curriculum.

The objectives were to:

- Explore practices and processes of embedding the development of students' academic literacies in a course curriculum;
- Investigate the role of Writing Centre tutors in providing formative feedback to students through online platforms;
- Track the development of tutor capacity to provide online formative feedback;
- Research the building of tutor and student feedback literacy
- Strengthen the development of a social and affective environment for supporting students during the COVID lockdown.

Key research question:

In what ways can collaborative intervention between an Education Faculty lecturer and Writing Centre staff support embedding of the development of academic literacies into a course curriculum?

Sub-questions:

- How can processes to enhance the development of feedback and feedback literacy be enhanced through the curriculum and assessment design?
- What is the role of the Writing Centre and tutors in supporting feedback and feedback literacy development?

Background to the intervention

The collaborative intervention involved the explicit integration of academic literacies development within the course curriculum content. Students were required to do in-depth reading and writing as part of an integrated strategy in order to engage with the disciplinary knowledge. The course curriculum content included explicit teaching about aspects of writing through ongoing opportunities for online feedback by peers and tutors on four nested tasks which built towards a final online summative assessment task. A nested task is a task that is built up from a number of related submissions. This gave students the opportunity to improve on feedback in an ongoing way. As Rasheeqa, one of the tutors, wrote “with each task students were required to draw from their knowledge and engage more deeply with the content. With each subsequent essay, the lecturer added more layers to the assignment question”.

The Writing Centre tutors were carefully selected and their capacity was developed in order to ensure they could provide appropriate support to students in the face-to-face and online environments. Training of tutors included orientation to the aims and objectives of the course, pedagogical dimensions of providing written and online feedback, and ICT skills training in Turnitin and Google Drive. The training

and orientation sessions between students and tutors focused on clarifying support and feedback expectations, allocating students to tutors, and building the relationship prior to online engagement. Students were asked to identify the type of feedback that they needed, which is valued by Boud and Molloy (2013) as a way of facilitating students' agency and improving the uptake of feedback.

Students were provided with multiple levels of feedback from tutors, the lecturer and from peers. This feedback included identifying strengths in current writing and thinking as well as suggestions for improvement. As well as promoting an agentic role on the part of the students (Boud & Molloy, 2013), the way in which feedback was given encouraged solidarity and reciprocity in the learning process. Furthermore, the psycho-social support identified as an important but often overlooked aspect of the feedback context by Carless (2013) was provided through the ongoing relational engagement which helped to ensure that students remained in the course despite the isolation and technological challenges of the lockdown context.

This intervention helped to create a web of support and engagement between the students, Writing Centre tutors and the lecturer within the context of the module and the instability of the COVID-19 context. In this way it enabled more equitable access to and continuity of academic literacy support which facilitated sustained engagement with knowledge in the module.

Literature review and conceptual framework

This section reviews literature pertaining to the most salient concepts in the research and then goes on to discuss the conceptual framework informing the study.

Academic literacies and epistemological access

An academic literacies approach views literacies as social practices embedded in socially- and culturally- situated contexts (Lea & Street, 1998; Street, 1984, as cited

in Collett & Dison, 2019). Within a higher education setting, theorists argue for a consideration of the complexity of writing practices required at university and a shift away from de-contextualised approaches to developing students' academic literacies (Lea & Street, 1998; Lea, 2016). Learning in higher education is deeply embedded within disciplinary traditions and literacies (Jacobs, 2005). This means that instead of one generic form of academic literacy, multiple literacies exist in different social or disciplinary contexts (Lea & Street, 1998, cited in Collett & Dison, 2019). Furthermore, there are implicit disciplinary writing conventions which students need to learn. The term "academic conventions" refers to "generally accepted discipline-specific rules of writing, such as use of first person, structure, validity and use of evidence and rules of referencing" (Rai, 2004, p. 151, as cited in Collett & Dison, 2019). Students are required to "switch practices between one setting and another" and "to deploy a repertoire of linguistic practices appropriate to each setting (Lea & Street, 1998, p. 159).

Academic literacies development is closely linked to attaining epistemological access within the university (Morrow, 1994, 2007). Morrow distinguished between students gaining formal access to an institution, on the one hand, and epistemological access to academic knowledge and practice, which is facilitated by systematic teaching and curriculum design (Morrow, 1994, 2007). Attaining epistemological access involves learning how to become a participant in academic practices and gaining membership of an academic community. It requires epistemological labour from the student and takes place over time (Du Preez & Le Grange, 2020; Morrow, 2007).

The dominant model that informs the work of Writing Centres in South Africa is that of a de-contextualised writing support service where students come for assistance outside of their disciplinary Teaching and Learning (T&L) context (Dison, 2018). In contrast to this, an academic literacies approach implies that literacies are "best taught by 'insiders' who have 'mastered the discourse' of that particular academic community" (Jacobs, 2005, p. 477). Jacobs (2005) recommends a collaborative approach in which the academic literacy specialist plays the role of an "outsider"

who collaborates with the lecturer (the disciplinary specialist) to provide scaffolding for the students' acquisition of literacies within the disciplinary site of learning. Collett and Dison (2019) argue that one of the most powerful ways of providing scaffolding for students' learning is through formative feedback on writing. According to Jacobs (2005), it is critical that tacit knowledge of academic and disciplinary literacies are made explicit to students. Students learn through opportunities to practise these literacies and engage with formative feedback, which guides them towards mastering the literacies.

Feedback and feedback literacy

There is consensus in the literature about a need for improved systems of student feedback and assessment in higher education institutions (HEIs) (Boud & Molloy, 2013; Hattie & Timperley, 2007; Deyi, 2011). David Boud and Elizabeth Molloy define feedback as “a process whereby learners obtain information about their work in order to appreciate the similarities and differences between the appropriate standards for a given work, and the qualities of the work itself, in order to generate improved work” (2013, p. 205). They contend that the giving of feedback is only justified if it has a positive impact on what learners can do. Furthermore, feedback needs to be conceptualised within the overall design of a course, assessment tasks and learning outcomes. Boud and Molloy (2013) argue that feedback on assessment activities is the key “mechanism through which students discover whether they are successful in their work and if they are on track to meet expectations” (p. 206).

Research on assessment in HEIs highlights an excessive focus on summative assessment activities while there should be a greater balance between formative and summative assessment practices (Carless & Boud, 2018; Collett & Dison, 2019; David, Nicol & Macfarlane-Dick, 2006; Gibbs, 1990). In addition, it has been found that poor feedback processes increase levels of student dissatisfaction and poor uptake of feedback (Boud & Molloy, 2013; Carless & Boud, 2018).

To enhance student learning in assessment activities, Boud and Molloy (2013, p. 20) propose the “nesting of tasks” so that students have the opportunity to apply feedback in subsequent tasks. They recommend that this can assist students to engage with the material at higher levels of complexity, with the support of the scaffolding provided by formative feedback. This requires careful consideration in the design of course curricula assessment activities to develop student academic literacies and competencies in an integrated way.

Boud and Molloy (2013) assert that feedback and the effort put into feedback processes can only be justified if students engage in the uptake of feedback and the responsibility of feedback is shifted from the teacher to the student. However, the development of student capacity to engage with feedback in an agentic or proactive way requires a range of levels of scaffolding and support to enhance the uptake of feedback. Building this capacity for feedback and engagement with feedback should take place throughout the various stages of the assessment process (Boud & Molloy, 2013). Furthermore, feedback needs to inform students’ ability in later life to “trust their self-evaluative capacity” (Boud & Molloy 2013, p. 3).

Engagement with feedback requires the development of feedback literacy. This includes developing self-reflective and judgmental competencies to increase students’ receptivity to feedback, and their ability to respond to it (Sutton, 2012). Feedback literacy is defined by Sutton (2012) as the ability to read, interpret, and use written feedback. Carless and Boud (2018) extend this definition of “student feedback literacy” to include an “understanding of what feedback is and how it can be managed effectively; capacities and dispositions to make productive use of feedback; and appreciation of the roles of teachers and themselves in these processes” (p. 2).

Current research by Carless and Boud (2018), Xu and Carless (2017) and Yang and Carless (2013) have shed light on the importance of addressing the social and affective dimensions of feedback in order to enhance student engagement and uptake of feedback. Formative feedback should build the self-esteem and agency

of students to engage with feedback. It should not be judgmental and needs to encourage interaction (Clarence, 2011).

The use of technology in online feedback

Online learning refers to the use of educational technologies to enable access to learning and teaching online (Arkorful & Abaidoo, 2015). It is capable of making course content available online, due to the widespread use of modern technologies both hardware resources, such as laptops and mobile phones, and software resources, such as learning management systems (Amory, 2010, Khoza, 2015; 2019, Mpungose, 2020). Thus, students can access course material through synchronous and asynchronous means from anywhere, provided that they have access to hardware, software, internet connectivity and data (Mpungose, 2020).

Advancement of educational technology and the availability and capacity of online connectivity have enabled a wide range of learning activities to take place. However, the COVID-19 context has exacerbated the pre-existing digital inequalities in T&L (Du Preez & Le Grange, 2020; Zheng & Walsham, 2021). There is unequal access and use of ICTs among students from different social groups (Hamburg & Lütgen, 2019). Zheng and Walsham, (2021, p. 3) argue that “digital inequality intersects and exacerbates existing structural inequalities”. Many students from poor socio-economic backgrounds with limited internet connectivity who traditionally accessed technology from campus have struggled to connect to online teaching programmes from their homes. In response, some universities have tried to solve this problem by providing devices and data to students. However, the success of such programmes has depended on the level of resources commanded by individual institutions. Zheng and Walsham (2021, p. 5) assert that bridging digital inequality requires not only technologies and skills training. Equally important are “associative interventions and supportive networks” which could address some of the underlying vulnerabilities of disadvantaged groups”.

Du Preez and Le Grange (2020, p. 90) argue that “having access to technology does not guarantee that one gains epistemological access. The latter depends on pedagogical/epistemological labour being performed by both lecturer and student.” The lecturer needs to design the curriculum in such a way that ensures continuity and progression in learning, which gives rise to knowledge acquisition (Morrow, 1994, 2007). There is a need for curriculum responsiveness which “entails accommodating diversity of socio-cultural realities of students, by developing a wider variety of instructional strategies and learning pathways” (Moll, 2004, p. 4, cited in du Preez and Le Grange, p. 99).

The use of technology has the potential to enhance the provision of feedback and support to students. Computer-assisted feedback in higher education has been shown to support learner achievement and reduce workload in large classes (Hattie & Timperley 2007; Du Preez & Le Grange 2020). The use of technology in an online environment can provide students with increased levels of feedback from peers and facilitators (Khoza, 2015; Ryan, Henderson, & Phillips, 2019; van Den Berg, Collett, & Verster, 2018). In addition, ICTs maintain a record of student engagement (van Den Berg et al., 2018) which can support further reflections and learning among students. However, it is essential that online feedback is conceptualised within the broader aims of the assessment task and the overall design of the course (Boud & Molloy 2013; Carless & Boud, 2018; Ryan, Henderson, & Phillips, 2019).

Turnitin, a similarity detection software platform is commonly used for detecting plagiarism. However, Turnitin’s affordances for peer review and lecturer feedback are less commonly known about and used (Khoza, 2015, Collett & Dison, 2019). Platforms such as Google Drive and Turnitin have powerful affordances for providing online, formative feedback on students’ writing, which are increasingly being explored. During the COVID-19 pandemic these online platforms were increasingly used to facilitate feedback and online learning (Turnbull, Chugh & Luck, 2021).

Political ethics of care

Tronto's (1993, 2013) political ethics of care is used as a normative framework to interpret tutors' engagement in providing formative feedback to students in a blended learning environment. The conscious use of the political ethics of care (Tronto, 1993, 2013) was used to frame the giving and receiving of feedback on this course and in the assessment practices. The ethics of care refers to the compelling moral obligation to attend to and meet the "needs of the particular others for whom we take responsibility" (Held, 2006, p. 10, cited in Tronto, 2013, p. 20). Ethics of care is based on a relational ontology and is premised on both the moral and practical dimensions of care of others (Tronto, 2013). The inclusion of the societal and political contexts of care is what shifts the conceptual frame to a political ethics of care (Tronto 1993, 2013). Engagement with the dimensions and moral elements of this framework highlighted issues of social justice and equity in relation both to the outcomes and processes of engagement toward strengthened processes of student support and academic achievement. Fisher and Tronto (1990, cited in Dison 2018) identified four interconnected dimensions of care. These dimensions include *caring about*, which is related to the recognition of caring needs, *caring for* associated with taking responsibility to provide care; *care-giving* which is the act of providing care, and *care receiving* which is linked to the care receiver responding to the care given. In 2013 Tronto (2013) included a fifth dimension of care, namely *caring with* that is associated with trust and solidarity. The table below illustrates these dimensions and their related moral elements.

Table 1: Dimensions of care and their associated moral elements

Dimension of care	Explanation of Dimension	Moral element associated with dimension
Caring about	Recognising people's needs for care	Attentiveness
Caring for	Once the need is recognised, taking responsibility to see that the need is met	Responsibility
Care-giving	The actual hands-on work of caring for people	Competence

Care-receiving	Responding to the care that is given by the care-giver	Responsiveness
Caring with	Reiteration of the process of care, where habits and patterns of care emerge over time	Trust and solidarity

Adapted from Bozalek, Mitchell, Dison and Alperstein (2016, p.829, cited in Dison 2018, p.68))

Tronto (1993) asserts that *caring about* involves the caregiver in noticing and recognising that care is necessary. This type of caring requires the moral element of attentiveness.

In context of the study, it involves the lecturer recognising the differentiated needs of students to develop the required academic literacies as an integral part of the process of learning within the university and disciplinary context. Furthermore, they need sustained scaffolding for this. In the emergency remote T&L context it requires an additional attentiveness to the challenges that students may experience in connecting and adjusting to online learning and support platforms. There was a need for attentiveness to the experiences of isolation and anxieties of students, who feared being left behind. Caring about required a heightened attentiveness to the need to establish social and emotional bonds and foster a supportive climate for learning.

Caring for requires the caregiver to take responsibility for formulating a response. This corresponds to the moral element of responsibility. Tronto (1993) asserts that responsibility is informed by cultural norms and practices rather than rules or obligations. This phase requires the caregiver to recognise that they have the agency to act and meet the need, and that the need can be met.

In the context of the study, *caring for* related to the responsibility for developing and implementing a curriculum and assessment design which involved the provision of sustained formative feedback. This included taking responsibility for setting up systems of online tutor, peer and lecturer feedback in an ongoing and integrated way. *Caring for* included planning for processes to build social and

emotional webs of care between Writing Centre tutors, students and the lecturer. It involved monitoring student access and online engagement to ensure support could be provided or improved.

Care-giving is the act of giving care. Tronto (1993) describes this as the act of contact between the care-giver and the care-receiver. The moral element of competence informs this engagement.

In order to meet the needs of students to develop their academic literacies, the care-giving capacity of tutors and the lecturer needed to be built developed. This included both building developing their technical ability to use the affordances of various technologies and developing their competence in giving written feedback in blended learning environments. The lockdown context demanded that lecturer and tutors extend their competence in engaging in learning-centred teaching in an emergency remote T&L context.

Care-receiving refers to the way in which receivers of care respond to care given by care-giver/s. This phase corresponds to the moral element of responsiveness.

Responsiveness in the context of the study is related to the capacity of students to engage with feedback and also to elicit feedback. The eliciting of feedback and the uptake of feedback are regarded by Boud and Molloy (2013) as critical to student learning. Carless and Boud (2018) stress the importance of facilitating the social and emotional context within which this reciprocal relationship can occur.

The fifth phase of care - *caring with* corresponds to the moral elements of trust and solidarity. This refers to a collective approach to care (circles of care where “solidarity as a social value, creates the conditions for caring” (Tronto, 2013, p. 156). According to Tronto (2013) solidarity creates a “virtuous circle”, where people are more attuned to others’ needs, and are therefore likely to be better at caring for them (pp. 156 to 157). The moral qualities of trust and solidarity are developed through “reiteration of the process of care, where habits and patterns of care emerge” over time (Bozalek, 2016). In the intervention, *caring with* was

demonstrated through empathising and engaging with students in an ongoing way, while assisting them to build their academic literacies. Building and sustaining the relationships between students and tutors in a blended learning context provided continuity in support in a programme and during the COVID-19 context.

Tronto (2010) argues that good care only takes place when all phases of care are engaged within a holistic and integrated way. A holistic and integrated conception of care is needed to enact socially just higher education (HE) pedagogical practices (Zembylas, Bozalek & Schafer, 2017). The COVID-19 related lockdown foregrounded inequalities in access to connectivity and devices and the need for social responsibility in relation to enhanced access and support to students. The move to remote online learning exposed systemic and multi-layered inequalities which are not possible for individual lecturers to address.

If universities view online learning as the answer to dealing with remote learning under COVID-19 and only address inequalities through providing more access to technology, they would be taking an instrumentalist approach. This, according to du Toit and Verhoef (2018, cited in Du Preez & Le Grange, 2021, p. 94) “denies the embodied and socially embedded nature of the individual”. Instrumentalist approaches neglect the complexity and inter-relatedness of the embodied person. In the B.Ed Honours course, digital technology was used as a means of facilitating a supportive network between lecturer, students and tutors. The pedagogical design, which embraced both the moral elements and practices of an ethic of care enabled a care-full consideration towards a more embodied, and responsive intra-personal approach. Integrated, care-full tutor feedback, follow-up of individual students and a relational approach to students’ learning in the course all contributed to a more just pedagogical process, particularly within the isolating and challenging COVID-19 context.

Methodology

The initial study between 2016 and 2018 was informed by a qualitative approach and Design Based Research (DBR) approach. Between 2019 and 2020 the inquiry continued using a participatory action research design (Chambers, 2007; Kemmis & McTaggart, 2005) where monthly critical collaborative reflections (Fook, 2011) would be engaged in between the tutors, lecturer and the Writing Centre Coordinator. This approach builds upon the collaborative ownership and understanding for change and improved action by participants (Whitehead, 2012). This chapter draws mainly on the data generated by reflections by the participants on the role of tutors and the development of students' academic literacies within the COVID-19 context.

Research Ethics approval was obtained through University of Western Cape's (UWC) Human and Social Science Research Ethics Committee (No. HS/16/6/26). During 2018 data was collected using anonymous online pre- and post-course student surveys to two B.Ed honours classes. In addition, semi-structured individual interviews were conducted with five students in the first iteration, and a focus-group interview of three students took place in the second iteration. Two groups of tutors and the Writing Centre Coordinator participated in monthly collaborative reflection sessions through a community of practice in 2018 and 2019. All the above were supplemented with the lecturer's field notes especially since the migration to online teaching during lockdown.

Data collection and analysis took place iteratively throughout the study in accordance with the processes and procedures of participatory action research. Data was collected from reflective meetings with tutors during the implementation process and subsequent reflective meetings of the researchers. This data was sorted, cleaned and analysed using the steps of thematic analysis identified by (Braun & Clarke 2006; Clarke & Braun, 2017; Kiger & Varpio, 2020). The analysis of data included identifying themes or patterned responses of meaning (Braun & Clarke, 2006). Themes that were identified were then related to Tronto's (2013)

dimensions and corresponding moral element of a political ethics of care. Engagement with the initial analysis of the themes took place jointly among the researchers in order to triangulate the analysis of these findings and to establish a level of internal validity.

Discussion of findings

A political ethics of care lens (Tronto, 2013) was used as a normative framework to illuminate the role of tutors in supporting the development of student academic literacies within a blended learning environment. In the analysis, under each of the phases of care identified by Tronto (2013) a short definition of the phase and related moral dimension are provided. This is followed by reflection on how care was enacted by tutors and the lecturer to address issues of equity and social justice in HE assessment and academic literacy practices. Both the strengths and shortcomings of the care provided are identified. Each phase presents a discussion of key findings in relation to the literature and challenges within the COVID-19 context.

Caring about - attentiveness

Caring about involves recognising that care is necessary (Tronto 1993). This phase relates to the moral element of attentiveness.

Initially the process began with the lecturer recognising the differentiated needs of postgraduate students to develop academic literacies as an integral part of their learning process. This led her to build in online tutor support within the curriculum design to attend to student needs, and their equitable access to learning and support.

Caring about acknowledged the complexity and developmental nature of support which needed to be considered in the curriculum planning process. This required attentiveness to increasing the academic literacy support students received from tutors as a strategy for sustained scaffolding to develop a range of academic

literacies. The tutors' core function was to provide written online formative feedback to students. The practical task of giving feedback required the building of a relational environment for learning, which was achieved through a substantial orientation. The lecturer also ensured that tutors and students interfaced in a physical space at the start of the course where students articulated their support needs. During the lockdown period this engagement continued on an online meeting platform which emulated a face-to-face environment.

The COVID-19 pandemic required a care-full attentiveness to the challenges that students experienced in connecting to learning and support platforms. In one of the processes of collaborative reflection it was noted that "students have a need for the content to be conveyed to them. However, there is also a need to support their development of academic literacies and students need this level of attentive support as well." There was a requirement for attentiveness to students' experiences of isolation and feelings of anxiety about being "left behind" due to either lack of access or connectivity to online learning platforms. Caring about required a heightened attentiveness to the need for social and emotional bonds of support in order to foster a climate for learning and trust between tutors and students. It also required attention to the need for data and devices for tutors as well as students to enable learning under lockdown conditions.

Caring about required careful consideration of the relationship between the affordances of different e-tools to support the development of academic literacies and their ability to support the development of these literacies. Timalizge, a tutor, commented that Turnitin helped to ensure a record of the attentive engagement between tutors and students. Turnitin and Google drive afforded tutors and students the opportunity to highlight support needs and keep an attentive memory of the engagement between parties.

For the tutors, the act of giving written online feedback required a high level of attentiveness. Tutors needed to pay attention to what the students were trying to communicate in their writing. Irene, a tutor, commented "It's about seeing it from

the student's point of view, rather than coming from a position of knowing how it should be and imposing it on the students". This emphasises the need to facilitate students' agency both in the writing process and in their engagement with feedback (Boud & Molloy, 2013, Carless & Boud, 2018).

Creating opportunities to encourage open communication between students and tutors enabled attentiveness to students' needs. Irene noted that "two students were often late in submitting their work online". She said, "it was only after reaching out to them that we realised one of them had serious connectivity challenges. I was able to discuss with [one of them] possible ways to overcome the problem so that he could stay on the course". Tutors felt that it was reassuring when students knew that somebody understood their personal support needs especially with the added isolation caused by lockdown, even though ultimately, they have to take full responsibility for their learning.

Caring for - responsibility

Caring for involves taking responsibility for the identified need and formulating a response. It corresponds to the moral element of responsibility (Tronto, 1993). Tronto (1993) argues that responsibility is embedded in a set of implicit, cultural practices rather than in a set of formal rules or obligations.

Caring for in the context of the study involved developing and implementing a curriculum and assessment design that integrated sustained formative feedback from tutors and the lecturer. Incorporating nested formative assessment tasks which fed into each other and the final paper provided multiple opportunities to identify and address support students' needs. Feedback took a dialogical form as tutors and students responded to each other through multiple iterations of connected tasks (Boud & Molloy, 2013; Bozalek, et al., 2016).

This phase of caring involves recognition that one can act to address the need, agency to do so and a belief that the need can be met (Tronto, 1993). Tutors took on responsibility for the giving of feedback and facilitating students' development

of academic literacies. A recurring theme in discussions with tutors was a deeply felt concern about how the students received the feedback that they (tutors) were providing. During debriefing sessions with the lecturer, tutors expressed their questions and anxieties about how their feedback came across. They were concerned that written feedback in an online environment did not elicit an immediate response from students, for example, questions and body language which would indicate how students were receiving the feedback. As Timalizge pointed out, “You can’t really follow up on nonverbal cues from a student. You don’t know whether they are getting what you are saying”. She wanted to find out whether students were “able to interpret the suggestions and the comments”. In an online environment tutors needed to be “hyper aware” of how the student may be receiving their feedback. Timalizge worried about how students felt in terms of her language. “Was it soft, was it harsh, was it something they felt like... they were being commanded to do?” Thus, tutors needed to be mindful of their language and use of tone in written language. (Debriefing meeting, 2018).

In order for students to engage with feedback effectively, tutors needed to be attuned to students’ needs. This required tutors to be reflexive about the way in which they were giving and receiving feedback. Giving online, written feedback was more time consuming in that it involved more detailed attention to a range of students’ needs. Kenny, a tutor, described himself as “spending a lot of time typing and re-typing sentences to be clearer, not offensive and to give as much positive feedback as possible” (Debriefing meeting, 2018). Although Kenny speaks from a tutor perspective, the point about time investment is true for all those involved in the T&L process. Carless and Winstone (2020) agree that the deliberate process of embedding feedback literacy learning for students is demanding on teachers’ time and requires collaboration from colleagues. Decisions about how time is spent are shaped by underlying values (Daly, 1996, cited in Tronto, 2013, p. 166). In taking responsibility for building formative feedback into the course, the lecturer and Writing Centre Coordinator recognised the value of students receiving formative feedback from tutors, thus providing resources to allow for the time taken.

Both Turnitin and Google Drive provided the affordance of a retentive record of feedback and uptake of feedback. With the use of Turnitin, students' progress can easily be monitored as there is consistent feedback on assignments. As Timalizge stated "it is easy to monitor the progress of the student's writing in that you are able to compare the current draft with the previous submission. In this way you can tell if the student is making improvements". Since previous assignments are automatically saved, tutors can also compare the students' previous and current work to gain insight into how students utilise feedback. Having immediate access to past work of students allowed tutors to act responsively to meet student needs.

In the context of COVID-19, tutors became more aware of the even greater responsibility they now carried towards caring for students. Irene said "I found that it required sensitivity on my part and more care in how I communicated back to the students about their work". Tutors found that students showed a higher level of anxiety and a need to be affirmed once they interacted with the tutor's feedback especially in a technical area. Irene made a comment, that "in a sense there is a different approach in terms of time demands, the tutor's effort and also the intensity with which the students make use of the feedback". Care is only sustainable if the carers attend to their own self-care (Tronto, 2013). Faced with heightened demands from students in a challenging context, tutors needed to establish boundaries as part of self-care as they worked in the online space.

Care-giving - competence

Care-giving refers to the act of giving of care. This is the point where care-givers come into contact with the receivers of care (Tronto 1993). It corresponds to the moral element of competence.

The online environment enabled a deepening of care-full feedback and engagement. Irene commented on this interaction, "Since the feedback is written down and is detailed, students have more time to engage with the feedback and also to reflect on what they are doing. They feel that because it's online, they can

always contact you for more details, or further checks on the feedback they received". Carless and Winstone (2020) argue that acquisition of feedback literacy can be greatly bolstered by technology due to the convenience it affords students in terms of timeliness and access to retrievable feedback. This can encourage students to make good use of the feedback they receive. Providing multiple and sustained opportunities for feedback and also feedback in asynchronistic mode, enabled tutors and students to provide more considered responses in their own time. Tutors felt that the 24/7 nature of access made it possible for them to give more detailed attention to students when they felt "fresh" and were able to concentrate. This observation is consistent with arguments made by Carless and Winstone (2020) that technology can bolster acquisition of feedback literacy due to the convenience it affords students in terms of timeliness and access to retrievable feedback. Referring back can encourage students to make better use of feedback.

In order to meet the needs of students to develop their academic literacies, the care-giving capacity of tutors and the lecturer needed to be built. For example, tutors' needed to develop a dialogical rather than didactic mode of engaging with students.

Although Writing Centre tutors have varied disciplinary backgrounds, they are trained to work with students from different disciplines. It is crucial that they understand that different disciplines have their own associated literacy practices. These practices include disciplinary conventions of writing but go deeper than this as they arise from particular types of engaging with knowledge and meaning-making in the field (Lea & Street 1998). In discussions, the lecturer, tutors and Writing Centre Coordinator unpacked what literacy practices were required in the complex long paper which the students were writing. These included reading and understanding theory and policy texts. In addition, they were required to conduct their own small-scale inquiries in their workplace, apply different types of knowledge and reflect on their own and institutional practices.

Tutors needed to understand and utilise the affordances of both Turnitin and Google Drive. Turnitin was particularly useful both as a plagiarism detector and a tool for giving feedback and this combination made it a powerful teaching tool. Lovemore, one of the tutors made the comment:

I interchanged between the Turnitin reports and where I need to give feedback to try and see where there were high levels of plagiarism for students, because for some you would see that this is good writing, but when you turn over to the Turnitin you see that it's all in red.

This can be taken further where the tutor uses identified similarities to assist the students to improve their ability to use sources appropriately in their own writing.

For the tutors, becoming competent as care-givers and providers of online formative feedback, went hand-in-hand with developing a high level of feedback literacy. The feedback literacy which they developed as students was intensified as they became more conscious and knowledgeable about uptake of feedback through their experience of giving feedback as a tutor. Tutors' questions and reflection on how students received their feedback was a central part of developing tutor feedback literacy. Explicit discussions about the concept of feedback literacy enhanced this capability.

Arona, the Writing Centre Coordinator, and Irene reflected on care-giving and how to show care that emphasises a common humanity, despite social distancing, which can reshape the human experience of needing others. They wrote:

We need to find alternative ways of showing care and empathy without using the body language that is no longer appropriate or safe, such as coming close, patting on the shoulder etc (affirming actions which are important in human interactions but also in the T&L processes). In a remote T&L context, the challenge is to find ways to still demonstrate mindfulness and care-full consideration of the needs of others, to still communicate friendliness and warmth toward others in writing despite the lack of face-to-face interactions.

Care-receiving - responsiveness

Care-receiving refers to the way in which receivers of care respond to care provided. This phase corresponds to the moral element of responsiveness. In the study, the concept is used to reflect on how students receive feedback as a care-giving process. Boud and Molloy (2013) identify the eliciting and uptake of feedback as central to student learning. In order to engage with feedback, students need to develop the attribute of feedback literacy (Carless & Boud, 2017). Boud and Molloy (2013) also emphasise the importance of students reflecting on what types of feedback they need and communicating this to the givers of feedback, which affirms students' agency.

When they were explicitly asked about what type of feedback they found most useful, one student requested that tutors be more specific when they suggested rephrasing or making changes to the student's work. Another said that he did not receive sufficient "in-depth feedback". A third student requested that examples be given, saying, "I understand it better if an example is made to show what has been done incorrectly and where I need to improve" (Students' feedback session April 2018).

Students had multiple opportunities for tutor, peer and lecturer feedback on their assessment tasks throughout the course. On a weekly basis, students were asked how they felt about giving and receiving feedback. This process helped to sensitise students and tutors to the social and affective dimensions of giving feedback and the need to create an environment of care and trust, which has been identified by Carless and Boud (2017) as necessary in supporting the uptake of feedback.

Building in processes where students were invited to reflect on their writing and take responsibility to elicit focused support from tutors in formative assessment encouraged students' responsiveness to care. This also helped tutors maintain a clear focus area for providing guidance when giving online feedback. One of the tutors, Kenny, noted that students were able to reflect and identify the areas they

needed help with. “What worked was when students reflected and they... gave me a cue where they needed feedback.” (Debriefing session, 2018).

Students' uptake of feedback needed to be predicated on a clear understanding of the role of the tutors, which was to give feedback on students' writing while the lecturer gave feedback on content. However, tutors commented that some students expected the tutors to, on the one hand, give feedback on content, or on the other hand, edit their work. It was communicated to them that the tutors' role was to give them guidance about how to improve the work within the context of the particular writing task, as well as help them to develop their academic literacies beyond the task, thereby facilitating epistemological access.

Introducing the tutors to the class was an important attempt to create a non-threatening environment within which students could freely elicit feedback and comment on the care given. Caring by its nature is a challenge to the notion that “individuals are entirely autonomous and self-supporting” (Tronto 1993, p. 134) and being in need of care means that one is in a position of vulnerability. Post-graduate, part-time students are likely to have established professional identities in their work environment. However, as students returning to university, many felt both dependent and vulnerable at having to engage with a range of academic literacies, as well as remote learning. From a perspective of care ethics, one needs to recognise the vulnerability of students and adopt a relational approach rather than treating them as autonomous agents working on their individual studies. The emergency online learning caused by the COVID-19 epidemic deepened some of these anxieties. The adverse connectivity challenges as well as the lack of access to ongoing support heightened anxiety levels. Student's ability to be responsive to care and for tutors to provide care were strained. During lockdown the online platforms and ongoing support provided a level of cognitive and well as psycho-social and emotional support for students.

The tutors found that as students felt more vulnerable during the lockdown period they tended to make additional contact online. Irene, took particular care to

ascertain how her students were receiving the feedback. Concerned that “the feedback might overwhelm or not be well understood, [she] wrote an email or sent the student a WhatsApp text to reassure them”. She said that “another way to ascertain if feedback was helpful was to look at how the student applied the advice in subsequent assignments”.

Even though there was no face-to-face engagement between tutors and students during the lockdown period, prior face-to-face contact at the introductory session helped to progressively forge a stronger sense of trust and rapport between tutors and students in lock-down. The researchers observed that online feedback can work more effectively over a period of time, related to the curriculum and assessment processes in the module. The verbal, interactive feedback sessions, in combination with the written feedback, supported the relational nature of the interactions and strengthened the dialogical dimension of the feedback process (Collett & Dison, 2018).

Online meeting platforms were used during the lockdown to emulate face-to-face sessions. Early observations support the findings of recent research that video feedback contributes to creating a social presence in online environments, can reduce students’ feelings of isolation, and promote interaction and closeness (Espasa, Mayordomo, Guasch & Martinez-Melo, 2019, cited in Carless & Winstone, 2020). Furthermore Mahoney, Macfarlane and Ajjawiet (2019) found that video feedback conveys a “richness of ... relational cues, imbuing it with a conversational feel” (Carless & Winstone, 2020, p. 8).

Caring with - trust and solidarity

Caring with refers to a collective approach to care (circles of care where “solidarity as a social value, creates the conditions for caring” (Tronto, 2013, pp. 156). *Caring with* corresponds to the moral elements of trust and solidarity. These elements were built incrementally in multiple ways between the tutors and students and between the tutors and the lecturer.

The strengthening of students' academic literacies and epistemological access was observed when they started a subsequent Honours module in the second semester. Trust and solidarity were built between tutors, students and the lecturer. The structured support which was embedded in the course, using a blended learning approach, enabled continuity of support and learning during the COVID-19 lockdown.

Through providing students with scaffolded formative assessment tasks and then challenging them to work independently on authentic summative tasks, students' agency was strengthened. These activities which included both the giving and receiving of feedback provided students with opportunities to build their confidence and trust in themselves and in others. Students' experiences of peer feedback, the modelling of blended learning and online learning practices of formative assessment had potential to inform their practices as teachers.

The researchers' collaborative processes of reflection and writing about practice in enhancing students' academic literacies has deepened their understanding and built trust and solidarity during the COVID-19 period of social distancing and isolation. These processes were conducted through an online meeting platform. Thus, online technology enabled the researchers to connect and provide each other with psycho-social and cognitive nourishment and care.

Key findings

This study has shown that tutors can play an important mediating role in the development of students' academic literacies by providing students with formative feedback through online platforms. During disruptions such as the COVID lockdown, this can contribute to enabling a continuity of learning and support in the learning process.

The development of student academic literacies and specifically feedback literacy were promoted through using technology and the specific affordances of Turnitin and Google Drive. Tutors found that both Turnitin and Google Drive offered unique

and complementary features to enhance formative feedback. Google Drive enabled students and tutors to provide feedback synchronously with multiple participants being able to engage in providing and eliciting feedback.

In order to provide good care, it is essential that tutors' capacity to provide online feedback is developed. This includes the capacity to provide appropriate feedback that students can understand and act on, as well as skills in using the technological tools.

The giving and receiving of feedback facilitates learning only if students develop feedback literacy in order to take up and apply feedback. Feedback literacy of students needs to be explicitly developed and tutors in turn need to heighten their own feedback literacy to facilitate students' learning.

Tutors can also play a much-needed role in providing psycho-social and emotional support to students. This too can be facilitated through technology, as part of a process informed by a political ethics of care.

Limitations of the study

The practice of embedding academic literacies development of students in curricula and the role of tutors in giving online formative feedback has much potential for enhancing student learning and success. There were limitations to this study as it was small-scale and involved relatively small numbers of students.

Recommendations for further research

It would be valuable to do research on these practices in a wider range of settings, for example in classes of undergraduates, a larger number of students and different disciplinary areas. These factors would influence how practices of this type would need to be adapted for different contexts.

The potential role of tutors in providing psycho-social and emotional support in the giving and receiving of feedback under blended learning conditions needs to be researched.

Conclusion

This chapter has illustrated how Tronto's political ethics of care (Tronto, 1993, 2013) can inform practices which enhance equity and social justice through the development of students' academic literacies in an integrated way within remote and blended learning contexts. It has explored how the moral and pedagogical practices of giving and receiving of feedback, informed by an ethics of care, enhanced the social, emotional and cognitive dimensions of support students received.

The model of this intervention where tutors from the Writing Centre played the role of giving feedback is not necessarily sustainable or replicable in this form since writing centres are notoriously under-resourced. In spite of this, the research demonstrates the potential for a powerful role that can be played by tutors in giving formative feedback within the context of a care-fully designed course.

Embedding academic literacies development in course curricula requires the commitment of both lecturers and tutors, as well as support from university management in order to forge lasting partnerships. Generative partnerships such as the one between the Faculty of Education and the UWC Writing Centre demonstrates one way in which a department or faculty can embed academic literacies into their programmes. Such interventions provide capacity development opportunities for disciplinary staff and tutors. This could contribute to sustainable embedding of academic literacies development which enhances epistemological access in degree programmes both within contact and remote T&L contexts.

As higher education inevitably moves in a direction of increasing online and blended modes of instruction, it needs to be recognised that addressing inequalities cannot be attained through the provision of material elements of technology alone. It is

argued here that greater attention needs to be paid to the multi-faceted, relational and embodied aspects of learning in order to enable students' attainment of epistemological access. Furthermore, strengthening pedagogical processes which enhance the development of students' academic literacies in course design are integral to enabling epistemological access and enhancing equity and social justice.

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CHAPTER 13:

4IR Technological knowledge and skills required by Technical Engineering lectures for the effective curriculum reconstruction of TVET Engineering Programmes

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Abstract

The Fourth Industrial Revolution (4IR) confirms that emerging and quickly evolving technologies are progressively driving the transformation and advancement of all industries and society. It is critical for technical engineering lecturers to keep up with the latest trends and technological advancements within their fields of specialisation, in order to effectively contribute to the development of a technologically literate society, and to share in the advancements brought about by advancing technologies of the early twenty-first century. The TPACK model of Koehler and Mishra is used to examine technical engineering lecturers' pedagogical practices as a complex interplay of their technological knowledge, technological content knowledge, and technological pedagogical knowledge. This chapter examines the empirical findings of a national survey that collected data from N=577 technical engineering lecturers on n=52 campuses of n=24 South African TVET Colleges that offer TVET Engineering study programmes. The purpose of the survey

was to profile TVET Engineering Study lecturers' knowledge and pedagogical practices within engineering programmes across the Republic. A sub-section of the survey specifically probed into participants' awareness and understanding of discipline-specific technological advancements and digital educational enterprises, as well as the potential impact of these on technical teaching. Empirical findings show that 52.3% (n=302) of the participating technical engineering lecturers are unaware of any technological advancements within their area of specialisation, and that they do not know what the potential impact of technological advancements might be on future technical training, following the current reconstruction of the curriculum. This chapter examines the possible implications of these findings for technical engineering curriculum renewal, considering that these lecturers, who are also the key role-players in the current curriculum implementation and evaluation stages, demonstrate limited awareness of technological advancements needed to effectively partake in the 4IR era. The underlying tension between these systems is revealed when Engeström's Cultural Historical Activity Theory (CHAT model) is applied to the activity systems involved. Accordingly, recommendations are made for the professional development of well-trained technical engineering lecturers, harnessed with cutting-edge 4IR technological knowledge and skills required for the current reconstruction of the TVET Technical Engineering curriculum.

Keywords: TVET lecturers; engineering disciplines; emerging technologies; curriculum reconstruction; technology-integrated learning environments; TPACK model; CHAT model.

Introduction and background

“The world is on the brink of a technological revolution that would fundamentally alter the way we live, work and relate to one another. In its scale, scope and complexity, transformation would be unlike anything humankind has experienced before” (Schwab, 2016, Online).

Technology development and industrial growth are increasing at an exponential rate with expanding global applications driven by the rapid development of emerging and enabling technologies (Brophy et al., 2008; Erboz, 2017; Marr, 2020; Graube & Mammes, 2018). The Fourth Industrial Revolution (4IR) refers to the ongoing automation of traditional manufacturing, production, and industrial practices, through the digitalisation, interconnectivity and communication of systems, using the Internet and other emerging Smart technologies (Erboz, 2017;

Graube & Mammes, 2018; Nundkumar & Subban, 2018; Philbeck & Davis, 2019). In Germany, the term Industry 4.0 is used synonymously when referring to the 4IR, the USA prefers Industrial Internet Consortium, while in Japan and Asia it is called the Industrial Value-Chain Initiative (IV-I). However, according to Philbeck and Davis (2019, p. 17), Industry 4.0 refers to a specific component within the larger concept of the 4IR, which specifically focusses on the relationship between digitization, organizational transformation, and productivity enhancement in manufacturing and production systems. The 4IR “affirms that technological change is a driver of transformation relevant to all industries and parts of society” (Philbeck & Davis, 2019, p. 17). The emerging transformation of cyber-physical systems that were brought about by disruptive emerging digital technologies, through the Internet of Things, the Internet of Services, and the Internet of Industrial Things, gave rise to the 4IR (Schwab, 2016; Winston et al., 2017). “Large-scale integration of machine-to-machine communication (M2M), Smart technologies, and the Internet of Things, drastically increased the automation of industries through improved communication and self-monitoring, and Smart machines that can analyse and diagnose issues without the need for human intervention” (Moore, 2019, Online). The 4IR is increasingly connecting a diverse range of emerging technologies in order to create value, not only for industries, but for all aspects of human life.

Table 1: Examples of emerging 4IR Technologies

Fourth Industrial Revolution (4IR) Technologies	
▪ 3D-Printing & 4D-Printing ▪ Advanced Materials & Intelligent Materials ▪ Agile Robots ▪ AI discovered chemical compounds, e.g. Covid-19 vaccines ▪ Androids ▪ Anti-aging drugs, e.g. senolytics ▪ Anti-lasers ▪ Artificial Intelligence & AI of Things ▪ Augmented Reality ▪ Automated food inventories and shopping ▪ Automated pilot avionics ▪ Automation ▪ Autonomous Vehicles ▪ Big Data ▪ Bionics ▪ Biorobotics ▪ Biotechnology, Genomics & Genetic Engineering ▪ Blockchains ▪ Cloud Technology ▪ Cloaking Devices ▪ Collaborative Robots (Cobots) ▪ Cybernetic organisms (Cyborgs) ▪ Cyber-Physical Systems (CPS) ▪ Distributed robotics ▪ Drones ▪ Edge Computing ▪ 5G Cellular Network Technology ▪ Global digital currency, e.g. Libra ▪ Hyper-personalised treatment for genetic mutations ▪ Industrial Internet of Things (IIoT)	▪ Intelligent Algorithms ▪ Internet of Autonomous Things (AuT) ▪ Internet of Energy (IoE) ▪ Internet of Military Things (IoMT) ▪ Internet of People (IoP) ▪ Internet of Services (IoS) ▪ Internet of Things (IoT) ▪ Internet of Vehicles (IoV) ▪ Interplanetary Internet ▪ Machine Learning ▪ Magnetic implants ▪ Massive Open Online Courses (MOOCs) ▪ Mobile cyber-physical systems ▪ Nano Materials & Nanotechnology ▪ Optical computers & light computing ▪ Predictive Analytics ▪ Process control systems ▪ Prosthetics ▪ Quantum Computing ▪ Quantum Entanglement & Tunnelling ▪ Satellite mega-constellations ▪ Simulation ▪ Smart baby care sensors ▪ Smart grids ▪ Smart-homes ▪ Supreme quantum computing ▪ Synthetic Biology ▪ Ubiquitous Production & Control ▪ Virtual Reality ▪ Wearable devices (e.g. watches, Smart-shirts)

The rapid rise and convergence of emerging 4IR technologies, of a few examples of which are listed in Table 1, are progressively steering the digital transformation of industries, companies, institutions, governments, economies, societies, and nations at large. The value contribution of the 4IR relies upon electronic identification, where set technologies are required for Smart manufacturing to be incorporated into manufacturing processes, in order to advance beyond mere digitisation (i.e. computerisation and connectivity), and to become part of the development path of Industry 4.0, i.e. visibility, transparency, predictive capacity, and adaptability (Schuh, Anderl, Gausemeier, ten Hompel & Wahlster 2017). Notably, industrial automation cyber-physical systems are radically and exponentially transforming most production and manufacturing industries, where cyber-physical systems are applied, e.g. to conventional programmable logic controllers, for more advanced controlling and monitoring of electromechanical processes (Thramboulidis, 2015).

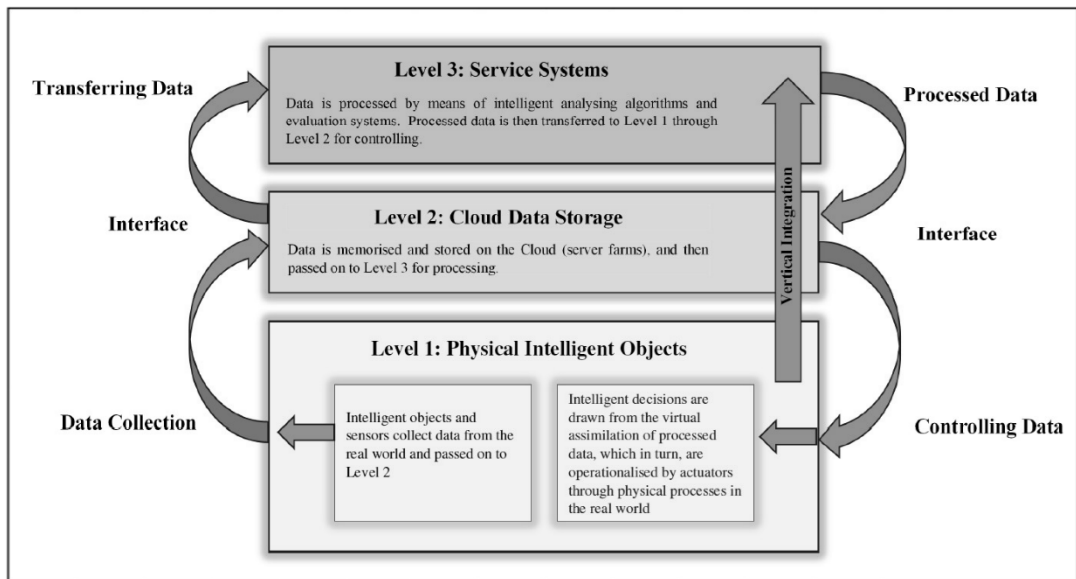


Figure 1. Design of a basic Cyber-Physical System (CPS) used in Smart production and manufacturing industries for automated control and monitoring of processes, adapted from Draht (2014, p. 51)

In the first integration level of a basic cyber-physical system (Figure 1), various forms of intelligent objects, Smart devices, and sensors, collect data and monitor physical processes, in order to design and create a virtual copy of the real world. On the second cyber level (Figure 1), data is memorised, identified according to variation, clustered for similarity, and stored in the Cloud, and then transferred to Level 3, where intelligent analysis algorithms and evaluation systems process the data. Processed data is transferred back to Level 1 through Level 2 that is controlling the data. Intelligent decisions, i.e. self-configured, self-adjusted, and self-optimised, are drawn from the virtual assimilation of processed data, which in turn, are operationalised by actuators through physical processes in the real world (Draht, 2014). “Physical and software components are deeply intertwined in cyber-physical systems, and are able to operate on different spatial and temporal scales, exhibit multiple and distinct behavioural modalities, and interact with each other in ways that change with context” (US National Science Foundation, 2021, Online).

	Levels of Autonomy	Transition Stages from Industrial Automation to Industrial Autonomy	Attributes
Industrial Autonomy	6	Symbiotic Autonomy	Autonomous operations of multi-collaborating ecosystems of companies are brought together via the Industrial Internet of Things and optimised across the industry, in order to achieve full autonomous interaction of data, resources and processes across separate industrial/manufacturing plants, without any human control or interference
	5	Autonomous Operations	Industrial/manufacturing facility is completely autonomous, including process operations, control, supply chains, etc.
	4	Autonomous Orchestration	Industrial/manufacturing facility operates autonomously, synchronised to optimise manufacturing, productivity and safety under most circumstances
	3	Semi-Autonomous	A mixture of autonomous and automated assets with human orchestration
Industrial Automation	2	Automated	Humans responsible for safe operations, assisted by traditional automation systems
	1	Semi-Automated	Humans and automation systems, e.g. cyber-physical systems, share the workload, but humans responsible for safe operations.
	0	Manual	All industrial and manufacturing facilities and processes are manually controlled by humans

Figure 2. Transition stages of industries from Industrial Automation to Industrial Autonomy (adapted from Yokogawa (2021, Online))

Industrial and manufacturing processes are being automated aggressively, due to the growing capabilities of cyber-physical systems which progressively monitor, control, and make independent decentralised decisions (Erboz, 2017). The global enforcement of social distancing regulations, in response to the tenacity of the ongoing Covid-19 pandemic, further accelerates the automation of industries (Marr, 2020). Figure 2 summarises the various levels of industrial automation, from the lowest level of autonomy, in which all industrial and manufacturing processes are still manually controlled by humans, to the highest level of symbiotic autonomy, in which autonomous operations of multi-collaborating ecosystems, are brought together via the Industrial Internet of Things. These are then optimised across an industry, in order to achieve full autonomous interaction of data, resources and processes across separate industrial / manufacturing plants, without any human control or interference (Yokogawa, 2021).

The rapid digitisation and automation of industries, however, has also brought new challenges for future labour markets. Automated systems are constantly raising the complexity of tasks, which in turn, incessantly demands higher levels of skills for

entry-level positions (Makgato, 2019). Another concern, raised by Shusterman (2015), is that many education and training institutions are currently educating and preparing students for obsolete occupations and work for which human activities are no longer required, due to the continuous digital automation and transformation of industries. Makgato (2019, p. 390) voiced the same concern:

“Youth and people who lack high level technological and interpersonal skills are becoming vulnerable due to digital automated jobs. There is a need for targeted and strategic skills, education and training that are responding to the changing technological world... ...supporting the application of transferable skills will be a key priority as we foster a sustainable and more productive economy”.

A technology and knowledge driven economy requires a well-trained workforce coupled with cutting-edge industry-based knowledge and skills in science, technology, engineering, and mathematics, to sustain the growing and ever-changing demands brought forth by the digital transformation of production and manufacturing industries. In his 2019 State of the Nation Address, President Cyril Ramaphosa remarked:

“The world we now inhabit is changing at a pace and in a manner that is unprecedented in human history. Revolutionary advances in technology are reshaping the way people work and live. They are transforming the way people relate to each other, the way societies function and the way they are governed... we are faced with a stark choice. It is a choice between being overtaken by technological change or harnessing it to serve our developmental aspirations. It is a choice between entrenching inequality or creating shared prosperity through innovation... To ensure that we effectively and with greater urgency harness technological change in pursuit of inclusive growth and social development, I have appointed a Presidential Commission on the 4th Industrial Revolution...[that] ... serves as a national overarching advisory mechanism on digital transformation” (Republic of South Africa, 2019, Online).

TVET Colleges, as “significant and necessary participants” in the 4IR (Nundkumar & Subban, 2018, p. 309), aspired to fulfil these demands. In his 2017 budget addressed to Parliament, the Minister of Higher Education, Science and Innovation,

Dr. Blade Nzimande (2017), acknowledged 4IR as an opportunity to speed up economic development and advance skills for industrialisation, and mandated TVET Colleges to yield individuals who can embrace change brought about by technology.

In his 11th of February 2021 parliamentary reply to a question raised during the National Assembly, Minister Nzimande (2021, Online) reported that:

“Since 2018, the Department has embarked on a plan to review and update programmes and qualifications offered at Technical and Vocational Education and Training (TVET) colleges in order to align them with the needs of industry and society. This plan has focused on the following aspects of the curriculum:

- 1. Integrating digital skills knowledge into current programmes*
- 2. Introducing new programmes in response to the fourth industrial revolution (4IR)*
- 3. Phasing out of outdated programmes*
- 4. Reconstruction of Engineering programmes to make them more responsive to the changing industry environment; and*
- 5. Revision and updating of subject content”.*

The Department of Higher Education, Science and Innovation, supported by CISCO Systems, Inc., an American multinational technology conglomerate, “developed digital skills training, which has been integrated into the National Certificate (Vocational) [NCV] programme. Knowledge of the use of the internet, email, cyber security and databases are examples of digital skills training that have been integrated into the NCV programme” (Nzimande, 2021, Online). The Department has also “developed a new stream focusing on Robotics in the NCV: Information Technology and Computer Science programme, which previously focused on programming and systems development only. This stream will cover subjects such as Electronic and Digital concepts for Robotics, Robotics Fundamentals, and Industrial Automation. The curriculum for this programme is currently being quality assured by UMALUSI and is envisaged for implementation in 2022” (Nzimande, 2021, Online).

According to Minister Nzimande (2021, Online), “the Department has collaborated with the Quality Council for Trades and Occupations (QCTO) in reconstructing curricula of Engineering Studies programmes to align with industry needs and standards of professional bodies. The programmes that have been prioritised and are currently being reconstructed are in the following fields: Electrical Engineering, Electronics Engineering, Mechanical Engineering and Civil Engineering. Curriculum reconstruction of engineering programmes commenced in August 2020 and is anticipated to be completed by June 2021. The completion of this process will see a reduction in the offering of the current NATED programmes and a move to occupational programmes, which are more industry-aligned”. Since 2018, the curricula of 38 subjects in the NATED programmes were updated, covering Engineering, Business and Services studies. The implementation of these revised/updated curricula started in January 2021 (Nzimande, 2021).

At the 2020 launch of the Engineering Programme at the University of Zululand, Minister Nzimande (2020, Online), appealed to the management of HEIs “not to compromise standards in offering... engineering programmes”, and furthermore expressed his “trust that those who are appointed to teach in these qualifications also hold the best qualifications in the engineering disciplines and command the best experience from related industries”. He also called upon “industries... to rally resources together... [to] invest in the development of engineering infrastructure at... [HEIs] ... and provide good experiential learning opportunities for students who will be pursuing their engineering qualifications” (Nzimande, 2020, Online). In order for Technical Engineering lecturers to be able to “command the best experiences from related industries” and to “provide experiential learning opportunities for students”, they need to keep abreast with the latest trends and technological advancements within their fields of specialisation, and the way in which emerging technologies are exponentially changing and transforming both industries and the training of Technical Engineering students.

It has become imperative for Technical Engineering lectures to stay abreast of the latest emerging technologies in their areas of specialisation, and to take up the

challenge to continuously upskill themselves in the integration and pedagogical use of these emerging technologies, in order to enable the effective preparation of TVET students for advancing technological driven Industries. Technical Engineering lecturers are mandated to be experts within their fields of specialisation, and to effectively mediate the professional development of their novice students. This should be done in order to gain not only theoretical knowledge, but also applicable digital skills and hands-on technological capabilities that industries will require from them. Even so, almost nothing is known about Technical Engineering TVET lecturers' awareness of industry-relevant technological advancements in their areas of specialisation, nor about their knowledge and practical skills in the pedagogical use or/and application of said technologies. It is also unclear whether or not Technical Engineering lecturers are actually considering the transformative impact that emerging technologies will have on their future teaching practices. Accordingly, this paper reports the empirical findings of a sub-section of a National survey study, that are informative in finding answers to these unresolved questions.

In order to create and mediate industry-relevant learning opportunities for students in technology-integrated learning environments, it has become essential for Technical Engineering lecturers to:

- Effectively attain and mediate the acquisition of 21st Century skills;
- Make the pedagogical shift from a transmission-based approach, to a transformative-based pedagogical approach, in which Technology is interwoven and used as a tool to mediate 21st century transformative learning experiences;
- Continuously develop and upskill their technological literacy and digital competencies, in order to stay abreast with the latest industry-based technological advancements in their fields of specialisation;
- Acquire and implement various types of technological knowledge into their pedagogical practices;

- Progressively integrate industry-relevant technologies and digital competencies into their pedagogical practices to achieve 21st century learning outcomes;
- Mediate the development of higher-order thinking skills and digital savvy among their Engineering students; and
- Self-evaluate the objectives, activities, and processes of their pedagogical practises.

Drawing from the available corpus of knowledge, these essential requirements are explored in the next section, as they constitute the theoretical underpinnings of the research component (i.e. a sub-section of a larger National survey study), of which the findings are reported in this chapter.

Theoretical underpinnings

Acquisition of 21st Century skill

21st Century skills are the abilities required in order to be effective workers, citizens and leaders in the global economy (Madhav et al., 2018).

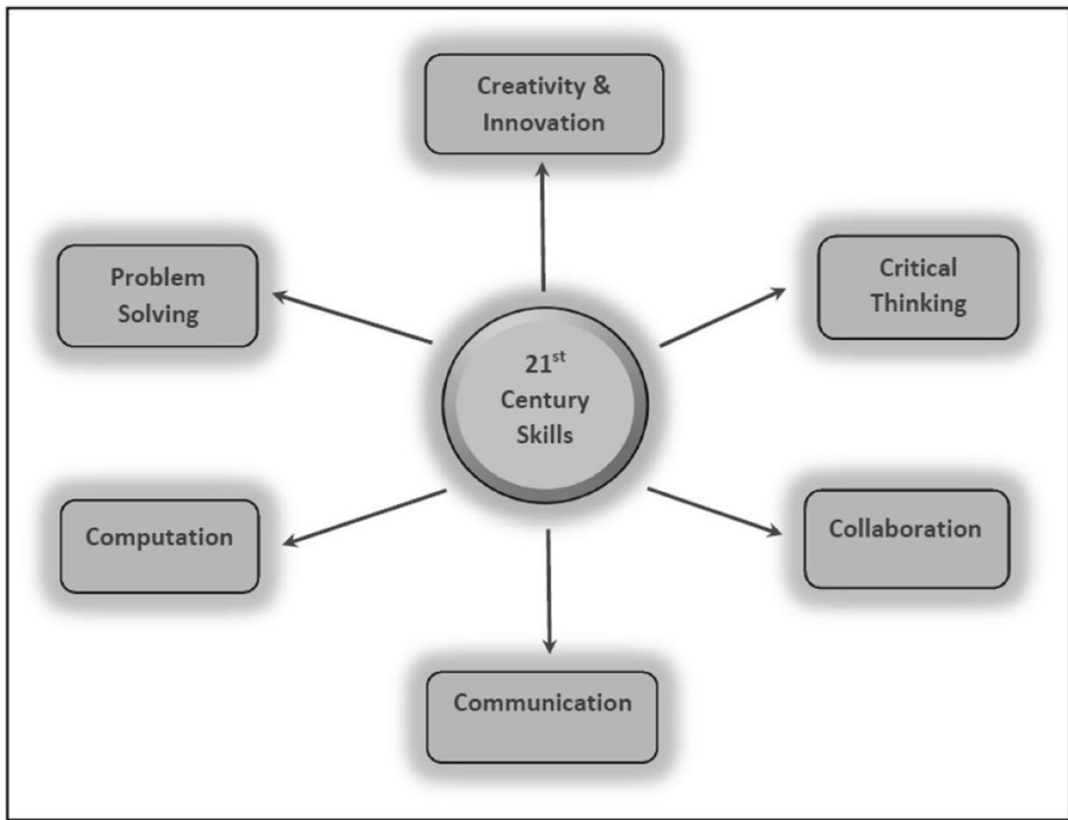


Figure 3: Essential 21st Century Skills, adapted from Madhav, Simelane-Mnisi, Hardman, Dlamini and Lilley (2018, p. 115)

Figure 3 shows essential 21st Century skills in which Technical Engineering lecturers should become experts, in order to effectively mediate the development and acquisition of these skills among their students. In order to develop communication skills amongst their students, Technical Engineering lecturers could, for example, ask students to share with the class how they solve problems. When students give correct answers, they should also be asked to explain how they arrived at their answers. Creativity requires the generation of new ideas and novel solutions to problems. Students could, for example, be provided with open-ended design challenges to get them to develop novel ways to solve established problems. Collaboration should still be encouraged in the information age, as people no longer work individually to solve problems, but rather work together. Collaboration could

be cultivated, e.g. by giving students group work problems that require the input and the collaboration of all the students.

Continuous professional development of technological literacy and digital competencies

According to Dakers (2018, p. 23), being technological literate “is something that one never actually becomes. One is, rather, always in the process of becoming, just as technologies are always in the process of becoming”. Digital competencies cannot be assessed in terms of right or wrong, as one is always in the process of becoming more technologically literate and more digitally competent. Furthermore, technological skills are not the defining factor for effective digital pedagogy. Effective digital pedagogy is much more about an attitude towards, and an aptitude with digital technologies, than having certain predetermined technological skills. Digital pedagogy requires a willingness to use new technologies effectively in classes, and to understand how and why they should be used (Burtis, 2016; Hardman et al., 2018; Howel, 2012; Stommel, 2013).

Figure 4 illustrates the Technological Pedagogical Content Knowledge (TPACK) model, first proposed by Koehler and Mishra (2006), which also forms part of the Department of Basic Educations’ (2018) Professional Development Framework for Digital Learning.

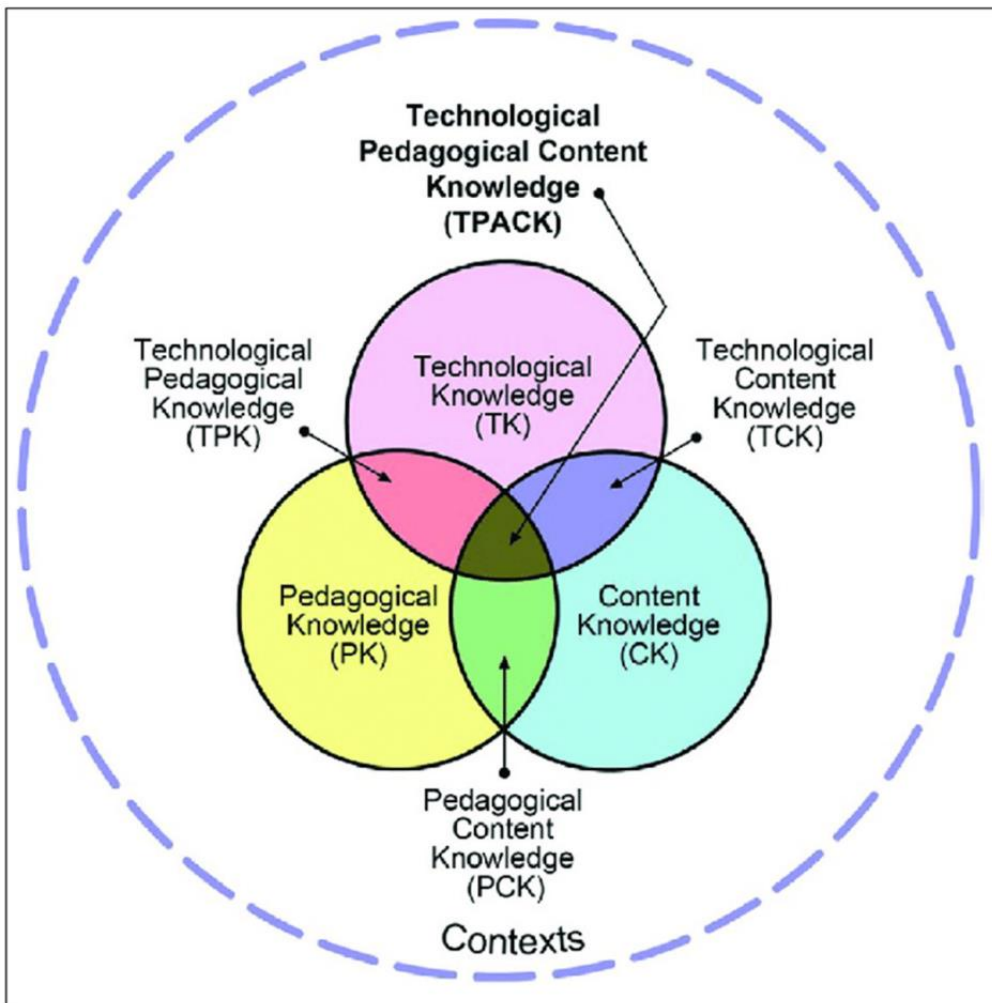


Figure 4: Technological Pedagogical Content Knowledge (TPACK) Model of Koehler and Mishra (2006)

The TPACK model emphasises that 21st Century teaching has become a highly complex activity, which embraces various kinds of knowledge. Cognisance and integration of the various types of TPACK knowledge, will enable Technical Engineering lecturers to use technology in their lessons effectively. The lecturer starts from the point of his/her subject knowledge, and then selects an appropriate technological tool for a lesson on her/his subject. The technology tool informs the selection of relevant pedagogical teaching methods (Hardman et al., 2018). When the TPACK model is applied to the educational context of Technical Engineering TVET lecturers, it illuminates the complex interplay of various types of knowledge

that Technical Engineering lecturers need to attain and integrate as part of their 21st century pedagogical practices (Table 2).

Table 2: Various types of technological knowledge applicable to Technical Engineering lecturers

Various Types of Knowledge	Defined for Technical Engineering TVET lecturers
TK Technological Knowledge	Technical Engineering lecturers' knowledge about how to use different kinds of ICT hardware and software and associated peripherals, how to operate them, and how to troubleshoot when necessary.
TCK Technological Content Knowledge	Pertains to Technical Engineering lecturers' knowledge about the way technology and content are linked, and how lecturers can transform their subject matter through the use of technology.
TPK Technological Pedagogical* Knowledge	Entails knowing how the use of ICTs enables teaching, and how Technical Engineering lecturers' approach to teaching can be transformed by ICT tools
PK Pedagogical* Knowledge	Technical Engineering lecturers' knowledge about students' learning, instructional methods, different educational theories, and learning assessments to teach subject matter without references towards content.
CK Content Knowledge	Technical Engineering lecturers' knowledge of the subject matter, without considering how to teach the subject matter.
PCK Pedagogical* Content Knowledge	Technical Engineering lecturers' knowledge of representing content knowledge and adopting pedagogical (andragogical) strategies to make the specific content/topic more understandable for students
<i>*Note</i> Although Koehler and Mishra's (2006) Technological Pedagogical Content Knowledge (TPACK) model is assimilated into the Department of Basic Educations' (2018) Professional Development Framework for Digital Learning, it also serve as a tool to illuminate the complex interplay of various types of knowledge that Technical Engineering lecturers need to attain and integrate as part of their 21st century pedagogical practices (Hardman, Molotsi, Lilley, Madhav, Simelane-Mnisi & Dlamini, 2018). Within TVET education, it would be more appropriate to use the term "Andragogical", instead of "Pedagogical", when referring to the education of adult TVET students	

Table 3: Linking Technical Engineering lecturers' SAMR levels of technology integration (Puentedura, 2006, 2014) with Bloom's (1956) Revised Digital Taxonomy (Anderson & Krathwohl, 2000), in order to mediate the development of higher order thinking skills among Technical Engineering students' (adapted from Puentedura (2006, 2014))

	Levels of Technology Integration	Pedagogical Use of Technology	Bloom's Revised Digital Taxonomy	Mediation of Engineering Students' Development of Thinking Skills
↑ Progressive Levels of Technology Integration ↑	TRANSFORMATION	Redefinition	Create	Designing, constructing, planning, producing, manufacturing, inventing, devising, programming, animating, broadcasting, filming, publishing
		Modification	Evaluate	Experimenting, hypothesising, testing, monitoring, critically evaluating, reviewing, posting, moderating, virtually collaborating and networking with experts in the field
	ENHANCEMENT	Augmentation	Analyse	Comparing, organising, deconstructing, attributing, outlining, finding, structuring, integrating, linking, validating, cracking, reverse engineering
		Substitution	Apply	Implementing, carrying out, using, executing, loading, playing, operating, hacking, uploading, sharing, editing
			Understand	Interpreting, summarising, inferring, paraphrasing, classifying, categorising, comparing, explaining, exemplifying, advance searching, Boolean searches, blogging, tagging, commenting, annotating
			Remember	Recognising, listing, describing, identifying, retrieving, naming, locating, finding, bulleting, pointing out, highlighting, bookmarking, social networking, social bookmarking, local bookmarking, Googling

Technical Engineering lecturers' pedagogical integration and use of industry-relevant technologies

The levels of technology integration, proposed by Puentedura's (2006, 2014) Substitution-Augmentation-Modification-Redefinition (SAMR) model, offers Technical Engineering lecturers the opportunity to self-evaluate and determine their progressive levels of pedagogical technology integration, i.e. from the lowest Substitution level, to Redefinition as the highest level of technology integration (first two columns of Table 3). The SAMR model could assist Technical Engineering lecturers "to consider how to take full advantage of the benefits of emerging technologies" (Hardman et al., 2018, p. 27). The first two integration levels, i.e. Substitution and Augmentation, denote the enhancement of teaching and learning through the use of technology; while the third and fourth levels of integration, i.e. Modification and Redefinition, epitomise the tangible transformation from traditional to 21st century technology-integrated teaching and learning practices (Puentedura, 2006, 2014). The 2nd column in Table 3 describes the integration criteria for each of the progressive levels of pedagogical technology integration.

Bloom's (1956) Revised Digital Taxonomy (Anderson & Krathwohl, 2000) is incorporated into the 3rd and 4th columns of Table 3, representing progressive levels of cognitive development, from lower to higher order thinking skills. The assimilation of these two models links Technical Engineering lecturers' progressive levels of pedagogical technology integration with their students' progressive development of lower to higher order thinking skills (Puentedura, 2006, 2014). Hence, Table 3 offers a valuable framework for Technical Engineering lecturers to plan, evaluate and align their teaching strategies and learning outcomes, relative to their levels of technology integration.

Cultural-historical Activity Theory (CHAT) is a third generation expansion of Vygotsky's (1978, 1986) cultural historical theory legacy. According to Vygotsky (1978, 1986), culture and tools play important roles within human development and education. Vygotsky (1978) found that cognitive development can be achieved through the learning process, provided that teaching is directed at this development. The teaching approach of Vygotsky (1978, 1986) involves actively guiding a student's problem solving through 'mediation', i.e. a structured process in which the mediator (expert teacher/lecturer) is more competent than the novice student. What begins as a social relationship between the 'expert' and the 'novice', turns inwards and becomes owned by the novice. This process only occurs in a specific developmental space called the "zone of proximal development" that opens up between the expert and novice. This zone represents the difference between what a novice can achieve on her/his own (actual development), and the novice's potential level of development, i.e. what the novice can accomplish with the assistance of the expert (Hardman et al., 2018, p. 11). Leont'ev (1978, 1981), a co-worker of Vygotsky, developed Activity Theory, which distinguishes between three levels of human activity, i.e. operations, goal-directed actions, and motives. Furthering the ideas of both Vygotsky and Leont'ev, Yrjö Engeström (1987, 1995, 1999, 2001, 2007) developed cultural-historical activity theory (CHAT). CHAT can be used to analyse human actions and interactions within activity systems that are mediated by tools, which in 21st century technology-integrated learning

environments, includes all digital devices and forms of electronic information that can be used to achieve learning outcomes (Murphy & Rodriguez-Manzanares, 2007).

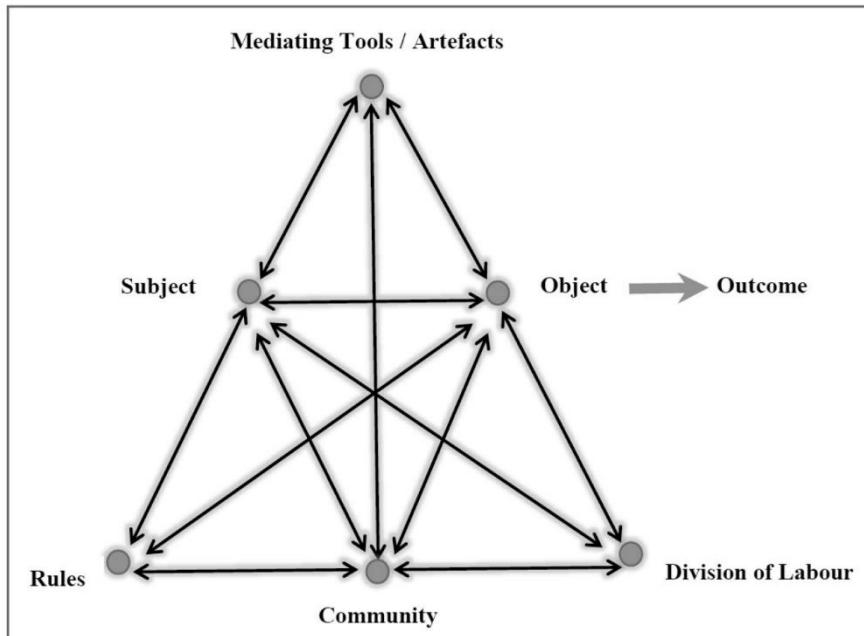


Figure 5: Engeström's (1999, 2001, 2007) 3rd generation Cultural Historical Activity Theory (CHAT)

Table 4: Generic descriptions of the various CHAT components, and what these components represent within the activity system of Technical Engineering lecturers' pedagogical practices

CHAT Components / Nodes	Generic Descriptions of CHAT Components	CHAT Components in the Activity System of Technical Engineering Lecturers' Pedagogical Practices
Subject	The subject of an activity system is the person, or group of people whose perspective is the focus of the analysis, e.g. a teacher or lecturers; group of learners or students.	Technical Engineering TVET lecturers
Object	The object is a problem space at which action is directed and transformed into an outcome. The object is the goal or motive of the activity system as a whole, but not necessarily that of individual members, e.g. improving learning, developing professional skills and knowledge, learner outcomes, etc.	Problem space at which action is directed and transformed to mediate the professional development of Technical Engineering students with cutting edge, industry-based 4IR technological and digital competencies
Mediating Tools / Artefacts	Tools or artefacts used to achieve the desired object, e.g. teaching strategies, the curriculum, and educational technologies. Both subject and object are influenced by mediating tools or artefacts. <i>Tools mediate between the subject and object.</i>	Aspects of industry-relevant 4IR technologies and digital tools used to mediate the professional development of Technical Engineering students, with cutting edge, industry-based 4IR technological and digital competencies
Community	Community to which the activity system belongs, e.g. both the teacher and learners; both the lecturer and the students	Both the Technical Engineering TVET College lecturer, and the students in her/his class
Division of Labour	Hierarchical power structures within the activity system, and also to the way in which labour is divided within the context of the system. <i>Mediates between the community and the object.</i>	Roles and division of labour within the Technical Engineering classroom community
Rules	Norms and rules of normal behaviour appropriate to the system that are understood by all members of the community. Define how participants are expected to behave, both implicit and explicit. Rules mediate between the subject and the community.	Both implicit and explicit norms and rules understood and accepted by both the Technical Engineering lecturer, as well as the students in the classroom community.
Outcome	Envisioned outcome of the successfully attained object	For the TVET College to yield Technical Engineering professionals with cutting edge Industry-relevant knowledge, technological skills and digital competencies, to fulfil the needs and demands of rapidly changing and digitally transforming 4IR industries.

Figure 5 visually illustrates Engeström's (1999, 2001, 2007) CHAT model, consisting of various component nodes, i.e. subject, object, community, mediating tools/artefacts, rules, and division of labour. Table 4 provides generic descriptions of the various CHAT components, and also explains how these apply to the activity system of Technical Engineering lecturers' 21st century pedagogical practices. The activity system dynamics of Technical Engineering TVET lecturers' pedagogical practices, are visually illustrated by Figure 6.

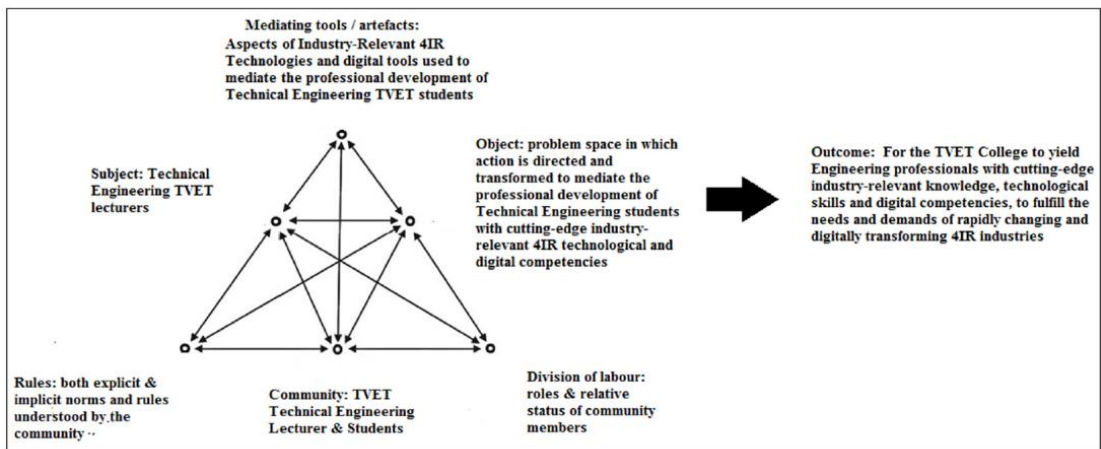


Figure 6: Activity System dynamics of Technical Engineering lecturers' pedagogical practices

An activity is embedded within a surrounding system, e.g. the integration and use of industry-relevant technologies is embedded in the activity system of Technical Engineering lecturers' pedagogical integration of technology in the classroom, which in turn, is embedded into the activity system of the TVET College. Within these embedded systems, the cultural life of the TVET College (or other setting) is developed and maintained. According to Leont'ev (1978, 1981), the central focus of the community's activities within an activity system, is to effectively achieve the object by means of various kinds of mediating tools and artefacts, e.g. industry-relevant emerging and advancing 4IR technologies and digital applications. It is important to clearly recognise and define the object of an activity system, however, it is not necessarily required for all participants in an activity system to always be fully aware of the object, e.g. it is not necessary for students in a Technical Engineering classroom community, to always be aware of the object of Technical Engineering lecturers' pedagogical practices. However, it is important for the subject (i.e. the Technical Engineering lecturer), to clearly identify and define the object (i.e. the professional development of students with cutting edge industry-relevant 4IR technological and digital competencies), towards which all pedagogical activities in the activity system are directed, and which is attained through the mediation of technological tools and digital applications.

According to Engeström (1987) and Leont'ev (1978), a central concern of their work is the conceptualisation of expansive learning, i.e. the capacity to interpret and expand the definition of the activity's object, and to respond to it in increasingly enriched ways. "Objects should not be confused with goals. Goals are primarily conscious, relatively short-lived and finite aims of individual actions" (Daniels, 2004:190). The object is the constantly reproduced purpose of a collective activity system that motivates and defines the horizon of possible goals and actions (Engeström, 1995; Leont'ev, 1978). "Expansive learning and enhanced professional practice occurs in activity settings that enable expansion of the object of activity. Expansive learning involves the creation of new knowledge and new practices for a newly emerging activity; that is, learning embedded in and constitutive of qualitative transformation of the entire activity system. Such a transformation may be triggered by the introduction of a new technology or set of regulations" (Daniels, 2004, p. 291). When technology is integrated and used as mediating tools in learning, it is required from Technical Engineering lecturers to make the shift from a traditional transmission-based approach to teaching and learning, to an approach that uses technology as a tool to mediate learning experiences that are transformative (Hardman et al., 2018).

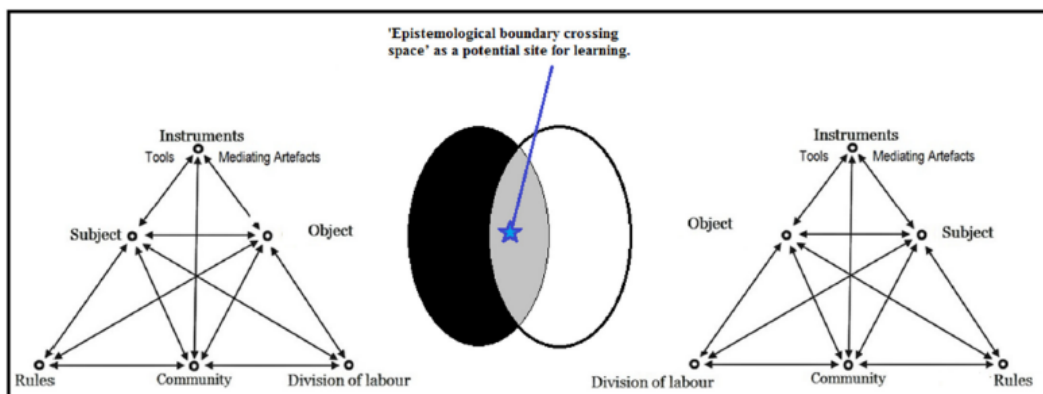


Figure 7: Epistemological boundary crossing space between activity systems is a potential site for learning

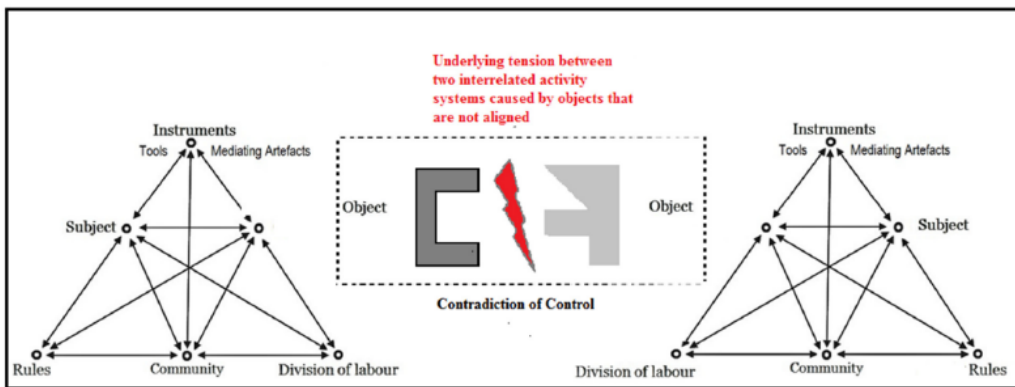


Figure 8: Underlying tension builds up between two juxtaposed activity systems when their objects are not aligned causing a contradiction of control

According to Engeström (2007), a researcher should always use two interdependent activity systems as a minimal unit of analysis. When the objects of two activity systems align, for example if a Technical Engineering lecturer and a student share the same objective, it creates an epistemological boundary crossing space, as a potential site for learning (Figure 7). However, when the objects of two interdependent activity systems are not aligned, it creates underlying tensions and conflict due to a contradiction of control (Figure 8). Such tension might hinder Technical Engineering lecturers in successfully integrating 4IR technologies in their pedagogical practices.

Researchers and Technical Engineering lecturers can use CHAT to explore and evaluate the inner dynamics of various activities and processes within the activity system of Technical Engineering lecturer's pedagogical practices, mediated through industry-relevant technologies and technological applications. The value of applying CHAT as an evaluation tool, is that it probes both the actual processes, as well as the activities of engaging with tasks within an activity system, rather than merely assessing the outcome.

Whether or not Technical Engineering lecturers are responding effectively to the 4IR's exponential digital transformation of industries, by continuously upskilling their technological skills and digital competencies, is not clear. Accordingly, this

paper reports the empirical findings of a National survey that collected data from N=577 Technical Engineering lecturers at 52 TVET College campuses across South Africa that offer TVET Engineering study programmes. The purpose of the survey was to profile TVET Engineering Study lecturers' knowledge and pedagogical practices within engineering programmes across South Africa. The findings reported in this paper are from a sub-section of the survey that specifically probed into participants' awareness, understanding and practical skills in the use of discipline-specific technological advancements and digital educational enterprises, as to fulfil the need of creating and mediating industry-relevant learning opportunities for students in technology-integrated learning environments.

Research design and methodology

This paper reports selected findings from a research initiative (Teis & Els, 2021) that was mandated by the South African Department of Higher Education and Training (DHET) and funded by the European Union (EU). The overall purpose of this large-scale survey study was to determine the National profile of Technical Engineering lecturers at TVET Colleges across the Republic's TVET landscape, pertaining to their:

- Demographical information, e.g. gender, age group, programmes, employment status, etc.;
- Teaching qualifications and subjects. taught;
- Teaching and Industry-Based Work Experience
- Work-integrated learning, i.e. industry-based and school-based;
- Professional development; as well as
- Awareness, knowledge and competencies in the practical use or/and application of industry-relevant technological advancements in their fields of specialisation.

Of which selected empirical findings of the first and last, are reported in this paper.

Research design

A quantitative single cross-sectional survey research design was followed. A cross-sectional research design was best suited for the purpose of this National survey, which collected profiling data from a random stratified sample of N=577 Technical Engineering lecturers across South Africa, at a single point in time (Connelly, 2016). This National Survey is anchored within the Radical Structuralist social research paradigm (Burrell & Morgan, 1979), as it quantitatively investigated radical change in Technical Engineering lecturers' 4IR technological knowledge and skills, which is required to effectively reconstruct the curriculum of TVET Engineering Programmes.

Study population and sample

The study population of this National survey study included Technical Engineering lecturers of Engineering study programmes at TVET Colleges across South Africa's nine Provinces. From the total study population, a random stratified sample of N=577 Technical Engineering lecturers participated in the survey, representative of n=52 campuses of n=24 TVET Colleges.

Method of data collection: Survey instrument

A structured survey instrument was purposefully developed to collect empirical data for the profiling of Technical Engineering TVET lecturers. The development of the survey was informed by the following:

- Existing Educational Policies and Policy Frameworks (Department of Basic Education, 2018; Department of Education, 1997, 2004; Department of Higher Education and Training, 2013a, 2013b, 2015, 2017a, 2017b)
- The available corpus of knowledge pertaining to TVET research in South Africa (amongst others, Buthelezi, 2018; Makgato, 2019; McBride et al., 2009; Nundkumar & Subban, 2018; Papier, 2011; Papier & McGrath, 2008;

Papier et al., 2016; Perold et al., 2012; Teis, 2014; Terblanche & Bitzer, 2018; Timire, 2018).

- Discourses on TVET professional development (Papier & McGrath, 2008; Perold et al., 2012); as well as
- Research team members' participation in prior provisional development research projects (Mosia, 2017).

Survey items collected empirical data from Technical Engineering lecturers in the form of binary-scale responses (e.g. yes/no; male/female), Likert-scale type of responses (e.g. not at all / not so / somewhat / very / extremely), as well as filled-in information (e.g. Please write down your qualifications), that was also empirically captured as quantitative data.

Ethical considerations

Ethical clearance was obtained from both the UFS Research Unit (UFS-HSD2017/1487) and the Department of Higher Education and Training. Research applications were submitted to the Principals of TVET College campuses, and formal permissions were obtained from TVET Colleges to administer the survey on their campuses. An informed consent letter was sent out to Technical Engineering lecturers on all TVET College campuses. Participation in the survey study was anonymous and voluntary. Participants were treated with respect, and were informed about their right to withdraw from the research process at any time or stage.

Funding

This publication has been developed through the Teaching and Learning Development Capacity Improvement Programme which is being implemented through a partnership between the Department of Higher Education and Training and the European Union.

Data collection

The research team engaged with regional TVET College management and Technical Engineering lecturers in order to contextualise and plan the data collection process, in terms of access, availability and participation, to ensure that data would be collected according to high ethical standards, and that data collection would not interfere with or disrupt the normal academic activities at TVET Colleges. Data collection started in July 2017 and ended in August 2019. Arrangements were made for a suitable date and time to administer the survey on each campus. Participating researchers were identified on the various TVET campuses to administer the survey to Technical Engineering lecturers, and to submit the completed surveys, signed consent forms and attendance registers to a central office at the University of the Free State. The survey responses of Technical Engineering lecturers were digitally captured in a combined quantitative dataset, and was prepared for statistical data analyses.

Statistical analyses

The statistical software SPSS® was used to calculate both descriptive statistics (frequencies and frequency percentages), as well as inferential statistics (cross-tabulations) on the combined dataset. However, for the purpose of the current discussion, only descriptive statistical findings are reported in this paper.

Demographical information of the sample

In total, 850 surveys were distributed to Technical Engineering lecturers on 46 campuses at 24 TVET Colleges across all nine Provinces of South Africa. A random stratified sample of N=577 Technical Engineering lecturers successfully completed the survey instrument, signifying a survey return rate of 67.88%.

Provincial distribution

Frequency Table 5 reports on the provincial and TVET College distribution of the total sample (N=577) of participating Technical Engineering lecturers.

Table 5. Provincial and TVET College distributions of the total sample (N=577)

	Frequencies (n)	Frequency %
North-West	15	2.6
Taletso TVET College	10	1.7
Vuselela TVET College	5	0.9
Kwa-Zulu Natal	85	14.7
Majuba TVET College	85	14.7
Western Cape	105	18.2
Boland College	7	1.2
College of Cape Town	6	1.0
False Bay College	30	5.2
Northlink College	47	8.1
South Cape TVET College	15	2.6
Northern Cape	42	7.3
Northern Cape Rural TVET College	11	1.9
Northern Cape TVET College	11	1.9
Northern Cape Urban TVET College	20	3.5
Free State	79	13.7
Maluti TVET	21	3.6
Motho TVET College	31	5.4
Flavious Mareka	27	4.7
Eastern Cape	92	15.9
East-Cape Midlands College	32	5.5
Ikhala TVET College	7	1.2
Ingwe TVET College	31	5.4
King Sabatha Dalindyebo College	22	3.8
Mpumalanga	47	8.1
Gert Sibande TVET College	20	3.5
Nkangala TVET College	10	1.7
Ehlanzeni TVET College	17	2.9
Limpopo	50	8.7
Capricorn TVET College	32	5.5
Vhembe TVET College	18	3.1
Gauteng	62	10.7
Tshwane South TVET College	62	10.7
Total Sample (N) =	577	100.0

The province most represented in the total sample, is the Western Cape with n=105 participants, i.e. 18.2% of the total sample; while the province least represented was the Northern Cape with n=42 participants, i.e. 7.3% of the total sample.

College distribution

Amongst the n=24 TVET Colleges that participated in the survey, Majuba TVET College is most represented by n=85 participants (14.7% of the total sample), while Vuselela TVET College is least represented by n=5 participants (0.9% of the total sample).

Gender and age group distributions

Frequency Table 6 shows the gender and age group distributions of the total sample (N=577).

Table 6: Gender and age group distributions of the total sample (N=577)

Gender	Frequencies (n)	Frequency %
Female	137	23.7
Male	431	74.7
Did not indicate	9	1.6
Total Sample (N) =	577	100.0
Age Groups	Frequencies (n)	Frequency %
25 years or younger	10	1.7
26-30	73	12.7
31-35	105	18.2
36-40	103	17.9
41-45	95	16.5
46-50	54	9.4
51-55	54	9.4
56-60	33	5.7
61 years or older	34	5.9
Did not indicate	16	2.8
Total Sample (N) =	577	100.0

The gender distribution of the total sample (N=577) comprises of n=431 (74.7%) males and n=137 (23.7%) females. It remains unclear why n=9 (1.6%) of the total sample decided not to indicate their gender group. Could these non-responses possibly be a form of resistance against gender stereotyping or marginalisation? Or did participants refrain from reporting their gender out of fear that this could, for some reason, negatively impact them? Gender identity and gender related issues of Technical Engineering lecturers, for the most part, still remain unexplored and require the attention of future research. The gender distribution reported for the current study's sample of participants, i.e. 74.6% male and 23.7% female, corresponds very well with the gender percentages reported by merSETA (2019, p. 25) for the manufacturing sectors, i.e. 76% male and 24% female. It is evident from the resounding similarity of gender distribution percentages in both studies, that the size of the current study's random stratified sample was large enough for data to become saturated, and to adequately reflect the larger South African population of TVET lecturers within the Engineering disciplines.

Most of the participants indicated that they were in the age groups 31 to 35 years of age (n=105; 18.2% of the total sample) and 36 to 40 years of age (n=103; 17.9% of the total sample). The age group least represented in the total sample are lecturer who falls within the age range 25 years or younger (n=10; 1.7%). Again, one could merely speculate on possible reasons why n=16 (2.8%) of the total sample did not report their age group.

Programmes distribution

When participants were asked to indicate their programmes, 47.5% (n=274) of the total sample (N=577) indicated their 1st programme as the National Accredited Technical Education Diploma (NATED), 35.5% (n=205) indicated the National Certificate: Vocational Programme (NCV), while 17% (n=98) did not disclose their 1st programme (Frequency Table 7). Furthermore, 13.5% (n=78) indicated NATED, and 17.9% (n=103) Skills, as their 2nd programme, while 68.6% (n=396) did not indicate a second programme, as most lectures only teach in one of the three TVET programmes.

Table 7: Programme distribution of the total sample (N=577)

		1 st TVET Programme	2 nd TVET Programme
National Accredited Technical Education Diploma (NATED) programme	Frequencies (n)	274	78
	Frequency %	47.5	13.5
National Certificate: Vocational (NCV) programme	Frequencies (n)	205	
	Frequency %	35.5	
Skills	Frequencies (n)		103
	Frequency %		17.9
Did not indicate	Frequencies (n)	98	396
	Frequency %	17.0	68.6
Totals	n	577	577
	%	100.0	100.0

As previously mentioned, the Department of Higher Education, Science and Innovation, supported by CISCO Systems, Inc., developed digital skills training, which has been integrated into the National Certificate (Vocational) [NCV] programme (Nzimande, 2021, Online). Therefore, 35.5% (n=205) of the total sample received digital skills training, which has been integrated into the NCV programme, after their participation in the current survey. The department is also introducing a new Robotics stream in the NCV programme in 2022, with subjects covering the automation of industries by robotics (Nzimande, 2021, Online). Minister Nzimande (2021, Online) furthermore anticipated a reduction in the offering of NATED programmes at TVET colleges, following the expected June 2021 completion of the curriculum reconstruction of engineering programmes.

1st Subject categories

The total group of participants specified n=90 different first subjects they teach. A possible explanation for the large variety of reported subjects might be that TVET Colleges are catering for different industries, for which different subjects are required. On the other hand, the large number of reported first subjects (n=90) could also possibly signify that the theoretical and practical quality of Technical Engineering subjects, within NATED and NCV programmes offered by TVET colleges across South Africa, is at risk of being jeopardised, due to none-standardised subjects. In order to address tangible categorical incoherencies and to increase the construct validity of reported first subjects, the research team reduced the number of reported first subjects (n=90) by categorising them into eight categories of subjects. Accordingly, frequency Table 8 reports the findings pertaining to the eight subject categories in which participants teach their first subjects.

Table 8: Subject categories in which participating TVET lecturers teach their first subject

Subject Categories	Frequencies (n)	Frequency %
Sciences	124	21.5
Electrical Engineering	150	26.0
Mechanical Engineering	145	25.1
Drawing/Drafting	29	5.0
Civil Engineering	73	12.7
ICT	12	2.1
Other	14	2.4
Skills Programme	8	1.4
Did not indicate	22	3.8
Total Sample (N) =	577	100.0

Amongst the N=577 Technical Engineering lecturers who participated, 26% (n=150) indicated that the first subject they teach is an Electrical Engineering subject, 25.1% (n=45) a Mechanical Engineering subject, and 21.5% (n=124) a Science subject. Furthermore, 12.7% (n=73) taught a Civil Engineering subject as their first subject, 5% (n=29) a Drawing/Drafting subject, 1.4% (n=8) a Skills Programme subject, 2.1% (n=12) an ICT subject, and 2.4% (n=14) another subject. Twenty-two participants (3.8% of the total sample) did not indicate the first subject they teach. As already mentioned, the DHET commenced with the reconstruction of the curriculum of Engineering programmes in August 2020, which is anticipated to be completed by June 2021 (Nzimande, 2021, Online). As the fields of Electrical Engineering, Mechanical Engineering, and Civil Engineering are being prioritised, the current curriculum reconstruction of engineering programmes will directly impact 63.8% (n=368) of the first subjects taught by the total sample of participants in the current investigation. Twenty-three percent (23.4%; n=135) of participating Technical Engineering lecturers reported that they were not teaching their first subjects; 62.2% (n=359) indicated that they were teaching their first subjects, while the majority of participants (85.6%; n=494) did not respond to this survey item.

Participants' formal teaching qualifications for the 1st subjects they teach

According to the findings reported in frequency Table 9, 40.9% (n=236) of the total sample of participants (N=577) indicated that they do have formal teaching qualifications pertaining to the 1st subject they teach, 37.3% (n=215) indicated no

formal teaching qualification for their 1st subject, one participant indicated VEOP, while 21.7% (n=125) did not respond to the survey question.

Table 9: Participants' formal teaching qualifications for the 1st subject they teach, as well as whether or not in-service training content enriched their teaching capabilities

Formal Teaching Qualification	Frequencies (n)	Frequency %
Did not indicate	125	21.7
Yes	236	40.9
No	215	37.3
VEOP	1	0.2
Total Sample (N) =	577	100.0
Did in-service training content enriched teaching capabilities	Frequencies (n)	Frequency %
Did not indicate	2	0.3
No	266	45.7
Yes	311	53.9
Total Sample (N) =	577	100.0

When asked whether or not in-service training content enriched their teaching capabilities, in keeping with new knowledge and skills, 53.9% (n=311) of the participants indicated Yes, while 45.7% (n=266) indicated No (frequency Table 9). It should be noted, however, that the 45.7% of participants who indicated that their teaching capabilities were not enriched by in-service training, also includes the 28.1% of participants who reported that they did not do any in-service training.

Empirical results and discussion of findings

The empirical findings from a sub-section of the survey that requested participants to self-rate their awareness, knowledge and competence in the practical use and/or application of industry-relevant 4IR technological developments/advancements, are reported in this section.

Participants' self-rated awareness of 4IR technological developments within their areas of specialisation

One of the survey items specifically requested Technical Engineering lectures to indicate whether or not they are aware of any technological developments/advancements in their areas of their specialisation.

Table 10: Participants' self-rated awareness of 4IR technological developments/advancements within their areas of specialisation

Awareness of technological developments / advancements in their area of specialisation	Frequencies (n)	Frequency %
Unaware of any technological developments/advancements in their area of specialisation	302	52.3
Aware of technological developments/advancements in their area of specialisation	217	37.6
Did not indicate	58	10.1
Total Sample: N =	577	100.0

Of the total sample (N=577), 37.6% (n=217) indicated that they were aware of technological developments/advancements in their areas of specialisation, 52.3% (n=302) indicated that they are unaware of any technological developments/advancements. This could contribute towards their professional development of technological literacy and digital competencies that are required for 21st century technology-integrated learning environments that are industry-relevant (frequency Table 10).

The next survey item requested from participants to: Please specify any three of these technological developments that you are aware of that are in your area of specialisation. Table 11 shows n=76 randomly selected examples of some of the technological developments that Technical Engineering lecturers specified as 4IR technologies within their areas of specialisation, in response to the survey item. Correctly specified 4IR technological developments are shaded in Table 11.

Table 11: Random examples of some of the 4IR technological developments that Technical Engineering lecturers specified within their areas of specialisation

3D Printers	GPS
Alternating Current (AC) Motor drives	Hydraulics
Advanced ARC Welding	In computer aided manufacturing and 3D
Air-conditioning	Integration of automation devices
Artisan training	Internet
Assessor	Isolators
Auto electrical qualification (Trade test)	Joint and termination
AUTOCAD Software integration and training	Knowledge of other languages in equipment mandarin
Automation, Mechatronics, robotics, diagnostics, troubleshooting	LED Lightning systems
Blended Learning	Linux operation systems
Boilermakers specialist	Machining, Phoning and videos
Brakes, Brakes by wire, Braking systems	Mechatronics (Automation)
Change on natural standards	Microsoft Word
Chemical	Moderator course
Cloud	New pipes , New pipe fittings
Component development	New trade test for electricians
Computer	Plumbing
Computer based fault finding rather than manual / human fault finding	Pneumatics
Computer skills and machine exposure	Power steering
Computerised programs	Power tools
Curriculum change in artisan development	Project management
Daylight switches	Quantity surveyor
Design methods	Remote operations
Development	Renewable energies, Solar and Wind
Development and implementation of electrical power systems simulators	Schematichydraulic circuit on computer
Digital electrical measuring instruments- kwh meters	Sequence starters
Drain camera	Setting of question papers
E-Books	Smart electrical grids
Education technology	Soldering techniques
E-Learning	Spreadsheet
Electrical	Steering and accelerator shaft and pedal developments
Electrical and diagnostic advancement software	Surveyor land total station
Electricity	Test equipment- Oscilloscope
Emission control systems	Toilets that uses sense devices
Energy recovery braking systems	Twizza soft drinks
Fibre concrete	Unit standard need to be revisited for the sake of relevancy
Film and media studies	Water based paints
Geysers	Woodwork- Kitchen installation

**Note: Correctly specified examples of 4IR technologies are shaded*

Although 37.6% (n=217) of the total sample of participants indicated that they were aware of technological developments/advancements in their areas of specialisation (Table 10), when asked to provide actual examples of such technologies, only 17.12% of the examples that participants provided (Table 11), were real examples of industry-relevant 4IR technological developments/advancements. It therefore

seems that participants overrated their actual awareness of technological developments/advancements within their areas of specialisation with 20%.

Participants' self-rated knowledge of the practical use and/or application of 4IR technological developments / advancements within their areas of specialisation

The survey also requested of participants to self-rate their knowledge of the practical use and/or application of 4IR technological developments/advancements.

Table 12: Participants' self-rated knowledge of the practical use and/or application of 4IR technological developments/advancements

Self-rated knowledge about the practical use and/or application of 4IR technologies	Frequencies (n)	Frequency %
Not at all knowledgeable	22	3.8
Not so knowledgeable	36	6.2
Somewhat knowledgeable	99	17.2
Very knowledgeable	107	18.5
Extremely knowledgeable	24	4.2
Did not indicate	289	50.1
Total Sample: N =	577	100.0

Of the total sample of participating TVET lecturers, 18.5% (n=107) rated themselves as very knowledgeable about the actual/practical use and/or application of the technological developments/advancements, 4.2% (n=24) rated themselves to be extremely knowledgeable, while 17.2% (n=99) consider themselves to be somewhat knowledgeable (frequency Table 12). Only 3.8% (n=22) indicated that they do not have any knowledge about the actual/practical use and/or application of such technological developments/advancements, while 6.2% (n=36) consider themselves not so knowledgeable. Fifty percent (n=289) of the total group of participants, however, did not respond to this survey question to rate their own knowledge in this regard.

Participants' self-rated competence in the practical use and/or application of 4IR technological developments / advancements within their areas of specialisation

Table 13: Participants' self-rated competence in the practical use and/or application of the technological developments/advancements

Self-rated competence in the practical use and/or application of 4IR technologies	Frequencies (n)	Frequency %
Not at all competent	20	3.5
Not so competent	39	6.8
Somewhat competent	87	15.1
Very competent	107	18.5
Extremely competent	26	4.5
Did not indicate	279	48.4
Total Sample: N =	577	100.0

With regards to participants self-rating of their own competence in the actual/practical use and/or application of these technological developments/advancements (frequency Table 13), 18.5% (n=107) rated themselves as very competent, and only 4.5% (n=26) viewed themselves as extremely competent. Furthermore, 6.8% (n=39) rated themselves as not so competent, while 3.5% (n=20) indicated that they are totally incompetent in the actual/practical use and/or application of these technological developments/advancements. One could merely speculate on a possible reason why 48.4% (n=279) of the total number of N=577 participants refrained from self-rating their competence in the practical use and/or application of technological advancements in their areas of specialisation. However, considering that 48.4% of the participants disregarded this test item, and that only 17.12% of participants were able to provide examples of actual 4IR technologies in their fields of specialisation (Table 11), it seems to lean more in favour of surmising such non-responses to also be indicative of participants' incompetence in the practical use/application of 4IR technological developments/advancements.

Summary of empirical findings

The empirical findings revealed that 52.3% of participating technical engineering lecturers are unaware of any technological advancements within their area of specialisation, and that they also do not know what the potential impact of such

technological advancements might be on future technical training. Notwithstanding the finding that 37.6% of the lecturers indicated that they were aware of technological developments/advancements in their areas of specialisation, when asked to provide actual examples of such technologies, only 17.12% of the examples that participants provided, were real examples of industry-relevant 4IR technological advancements, suggesting that participants overrated their actual awareness of 4IR technological advancements with 20%. Only 23% of the lecturers rated themselves as competent in the practical use and/or application of 4IR technological advancements, while 48.4% refrained from rating their competence in the practical use of 4IR technologies. These findings suggest that the vast majority of South African Technical Engineering TVET lecturers is lacking the necessary competence in 4IR technological knowledge and skills, which is required to effectively reconstruct the curriculum of TVET Engineering Programmes, and to sufficiently prepare their students for the growing demands set by industries.

Conclusions and recommendations for future research

This paper is in support of the Department of Higher Education, Science and Innovation's current reconstruction of Engineering programmes offered at TVET colleges, in order to align and make them responsive to the rapidly changing needs of industries. The 4IR's exponential digital transformation and automation of industries is increasingly raising the complexity of knowledge and skills required for entry-level positions in industries. Subsequently, Technical Engineering lecturers are mandated to continuously upskill their knowledge and skills in the practical application of the latest industry-relevant 4IR technological advancements within their areas of specialisation, and to effectively integrate these into their pedagogical practices. Technical Engineering lecturers should become experts within their fields of specialisation, in order to mediate their students effectively to develop, not only theoretical knowledge, but also applicable digital skills and hands-

on technological capabilities, that industries will demand from them at entry-level positions. To accomplish this, Technical Engineering lecturers must shift their pedagogical approach from a transmission-based approach to a transformative-based approach, in which technology is interwoven and used as a mediating tool to create 21st century transformative learning experiences for their students in technology-integrated learning environments that are industry based. Accordingly, this paper provides valuable guidelines for Technical Engineering lecturers on how to integrate industry-relevant technologies and digital competencies in their pedagogical practices progressively, to achieve 21st century learning outcomes. This paper also shows how Technical Engineering lecturers can progressively mediate the development of higher-order thinking skills and digital savviness among their Engineering students, relative to their respective levels of technology integration.

As already mentioned, the DHET commenced with the reconstruction of the curriculum of Engineering programmes in August 2020, which is anticipated to be completed by June 2021 (Nzimande, 2021, Online). As the fields of Electrical Engineering, Mechanical Engineering, and Civil Engineering are being prioritised, the current curriculum reconstruction of engineering programmes will directly impact 63.8% (n=368) of the first subjects taught by the total sample of participants in the current investigation.

The management of TVET institutions, for the most part, still seem reluctant to fully capitalise on the potential benefits and growth that could be gained from 4IR technology's fertile disruption and transformation of organisations and industries (Renjin, 2019). It is therefore not surprising that the empirical findings reported in this paper show that, at the time of their participation in the national survey, 52.3% (n=302) of the N=577 Technical Engineering lecturers, were unaware of any technological advancements within their area of specialisation, and also did not know what the potential impact of these might be on future technical training. Since their participation in the survey between July 2017 and August 2019, 35.5% (n=205) of the Technical Engineering lecturers in the current investigation received digital skills training, which has been integrated into the NCV programme

(Nzimande, 2021, Online). The findings reported in this paper that relate to Technical Engineering lecturers' awareness, knowledge and competence in the practical use and/or application of industry-relevant 4IR technological developments/advancements. The findings therefore offer a valuable point of reference for the Department of Higher Education, Science and Innovation against which to compare the effectiveness/success of the digital skills training that was implemented after August 2019 for Technical Engineering lecturers in the NCV programme.

TVET Colleges will have to invest in establishing the necessary infrastructure that is required for Technical Engineering lecturers to successfully integrate industry-relevant 4IR technologies into their pedagogical practices in technology-integrated learning environments. This will require not only investment in technology hardware and software, but also provide applicable training opportunities for IT staff and lecturers to be able to integrate and use 4IR technologies effectively in order to deliver 21st century industry-based learning opportunities to students. It is crucial that the management of TVET colleges and Technical Engineering lecturers share the same objective, i.e. the professional development of Technical Engineering students with cutting-edge industry-relevant 4IR technological and digital competencies, in order to avert underlying tensions between the two activity systems, resulting from a contradiction of control.

Some of the pivotal questions that still require the attention of future research, include:

- How can the management of TVET Colleges sufficiently support Technical Engineering lecturers in establishing effective industry-relevant 4IR technology-integrated learning environments and learning opportunities for their students?
- What digital open resources, applications, and media platforms are readily available to continuously keep Technical Engineering lecturers updated on

the latest trends and technological advancements within their fields of specialisation?

- What are the possible reasons why TVET lecturers are not currently utilising the extensive open source learning materials that are available via the DHET Lecturer Support System Portal?
- What continuous professional development opportunities can be created for Technical Engineering lecturers with regard to the effective integration, application and utilisation of advancing and emerging technologies in their teaching of Technical Engineering subjects?
- Is the digital skills training that was recently integrated into NCV programme, which relates to knowledge of the use of the internet, email, cyber security and databases, sufficiently garnering Technical Engineering lecturers with the required technological skills and digital competencies to integrate and use aspects of 4IR technologies as part of their pedagogical practices effectively?
- Is the digital skills training that was recently integrated into NCV programme, which relates to knowledge of the use of the internet, email, cyber security and databases, sufficiently preparing Technical Engineering students for the high demands of advancing technological driven 4IR Industries?
- What professional development opportunities can be developed and offered to Technical Engineering lecturers within the NCV programme, in order to sufficiently upskill and prepare them with the necessary industry-relevant digital competencies and technical skills in robotics and industrial automation required for the implementation of the new NCV Robotics stream in 2022.

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