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Doctor of Philosophy in Education

Independent Capability for Work:

A critical functioning in a Capabilities Approach to higher education in South Africa

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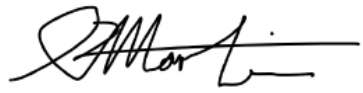
Signature:  **Date: 27 April 2021**

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Abstract

With a high skills mismatch in the South African labour market (approximately 53% from Mission Talent Mass Uniqueness: A Global Challenge for One Billion Workers, 2019), and a diminishing of confidence in higher education graduates due to a lack of workplace skills and competencies (2015 Talent Shortage Survey, 2015), South African higher education has come under the spotlight to try and improve the quality of graduates entering the labour force. While there is a vast amount of knowledge and research on what skills are desired and/or required from various labour forces globally, it has proven challenging to successfully implement and integrate those competencies into higher education. This study focusses on the perspectives and values of higher education institutions, their staff and their students as to what skills and competencies they value in the professional development of the students and aligning to those with the required/desired competencies provided by the literature and research. This study develops the concept of Independent Capability (IC), provided by Stephenson (2012), within a South African, private higher education context that focuses on improving the ability of graduates to perform better in the world of work. This is the concept of Independent Capability for Work (IC_w) and proposes that the development of IC_w within tertiary students through IC_w engaging educational practices can provide an implementable pathway to improved quality of graduates. It then proposes two assessment tools that can be used to measure engagement with IC_w within educational practices. The Capabilities Approach was used as a conceptual framework as its primary principle is the development of individuals to enact their valued life functionings (Deneulin & Shahani, 2009), to which IC_w strongly aligns. Legitimation Code Theory (LCT) was used as a framework for the formulation of the assessment tools. The study utilised an Exploratory mixed-method to identify and evaluate the competencies/functionings that are valued by the 5 private higher education institutions, 9 of their faculty and 120 of their students using document analysis, semi-structured interviews, and highly structured questionnaires to establish the competencies/functionings that constitute IC_w. The findings of the study argues that IC_w is an amalgamation 3 aspects: Cognitive, Emotional, and Personal/Professional Traits. Moreover, it argues through the findings that each aspect has 3, most-valued functionings within the South African private higher education context. A call is made to utilise the IC_w assessment tools provided by this study to conduct further research into IC_w engaging practices in South African education across all levels and phases.

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List of Common Abbreviations

Abbreviation	Meaning
CA	Capabilities Approach
CHE	Council on Higher education
DC	Dependent Capability
DHET	Department of Higher Education
EI	Emotional Intelligence
IC	Independent Capability
LCT	Legitimate Code Theory
PHEI	Private Higher Education Institutions
WIL	Work Integrated Learning
ICSS	Independent Capability Screening Scorecard
ICPRT	Independent Capability Pedagogical Research Tool

Chapter One: Introduction and Background to the Study

1.1 Introduction

There are currently several pressing issues facing the South African education system including the issue of tertiary level graduates that struggle to find employment. The South African student enters secondary school in grade 8 (approximately 13-14 years of age) and upon achieving the National Senior Certificate in the final year of secondary school (grade 12 approximately 18 years of age), has the opportunity to further their studies in higher/tertiary education. According to the Quarterly Labour Force Survey (QLFS) there are 467 000 unemployed higher education graduates in South Africa (as of July 2016) – approximately 13.2% of the total number of graduates (Quarterly Labour Force Survey: Quarter 3 1026, 2017). More recently, the QLFS: Quarter 4 2019 (2020) has indicated that of the 6.7 million unemployed people in South Africa, 8.7% had some form of higher education qualification which equates to 582 900 unemployed higher education graduates. With the event of the Covid19 pandemic, these statistics have been greatly affected with a major increase in people who are not economically active to approximately 20.6 million people (*Quarterly Labour Force Survey: Q2 2020*, 2020). It is also important to note that some research has shown that, comparatively speaking, graduate employment rates are not nearly as problematic as the statistics show and that higher education graduates are still the group with the best prospects when entering the labour market (van Broekhuizen et al., 2016). However, the issue of graduate employment rates remain as a point of improvement for both government and the education sector.

There are a variety of reasons for the levels of unemployment in general and unemployment of tertiary education graduates in particular. These reasons range from global and local economic trends to political policies, and the obvious influence of the global Covid19 pandemic, but of specific interest to this study are the reasons suggested by the employers themselves. The Talent Shortage Survey (ManpowerGroup, 2015) suggests that two main reasons that employers find it difficult to employ people is due to lack of technical skills and workplace competencies. This was indicated by a combined total of 51% of all employers surveyed. According to the same survey *2015 Talent Shortage Survey* (2015, p. 6), between 2014 and 2015, the percentage of South African employers that struggled to fill positions due to a lack of confidence in graduate ability

rose from 8% to 31%. This indicates that there is a skills gap between what employers are requiring and what educational institutions and graduates are producing

Another report, *Mission Talent Mass Uniqueness: A Global Challenge for One Billion Workers* (2019) indicated that South Africa has over 50% skills mismatch in the labour market. The mismatch percentage in South Africa was the highest of the participant countries with majority sitting between 35%-40% mismatch percentage. A skills mismatch was defined as

> "*workers on the labor market have competencies that either exceed or are not sufficient for the activities they perform."* (*Mission Talent Mass Uniqueness: A Global Challenge for One Billion Workers*, 2019, p. 18)

The report explains how the modern labour market is becoming more flexible and changing at a faster speed than previously in history. As a result, the desired competencies that are currently needed in the market are not being produced by education fast enough. Thus, graduates looking for employment are already at a disadvantage as the competencies they have are mismatched to what is currently desired. This skills gap, combined with higher unemployment levels results in higher skills mismatch percentage.

> *"The skills gap often forces employers to hire talent whose competencies are far from those required and they have to invest resources in reskilling them… This problem – the skills mismatch – is much less obvious than the skills gap, as it creates the illusion of employment and economic and social stability"* (*Mission Talent Mass Uniqueness: A Global Challenge for One Billion Workers*, 2019, p. 7)

The report found that adopting a more human-centric approach to human capital development could help improve the economy and lessen both the skills gap and mismatch percentage. The report recommended that the three aspects that need to be prioritised are workforce capabilities, motivation and access to training. The report also recommends that the best way to address the workforce capabilities is the improvement and development of education programmes with co-operation with employers, while promoting personal development within students. This recommendation highlights the importance of the education sector in the development of potential solutions to both the skills gap and the skills mismatch.

The education sector is aware of their need to contribute to addressing the skills gap, specifically in South Africa. Higher Education South Africa (HESA) – an independent body that is now known as Universities South Africa (USAf) – conducted a gap analysis between certain personal

attributes that were expected from graduates by the employers in South Africa and what the employers were experiencing. The results showed that across a variety of personal attributes there was a 20% – 34% gap in employer satisfaction levels (Griesel & Parker, 2009). In other words, the employers did not experience the required level of desired attributes in their newly employed graduates.

The concept of workplace competencies is not new and has been researched and discussed for over 40 years. Carnevale, Gainer, Meltzer and Holland (1988) provided insight on the key workplace basic skills that were valued by employers in America. Later Carnevale & Smith (2013) provided updates on these as the American economy moved into a post-industrial era. In the book titled *Workforce readiness: Competencies and Assessment*, O'Neil Jr (2014) compiled a number of papers that looked to identify and assess the desired workplace competencies funded by the National Centre for Research on Evaluation, Standards and Student Testing (CRESST). In the South African context, the various government departments have provided a number of competency frameworks identifying specifically desired competencies for specific sectors and professions, including middle management (*Guide to the Middle Management Competency Framework*, 2006), Finance (*The Global Competitiveness Report 2019*, 2019), and Career Development practitioners (*Competency Framework for Career Development Practitioners in South Africa*, 2015).

As shown above, there is a vast amount of research within the labour sector focussing on closing the skills gap and addressing skills mismatches in order to better grow the economy. There is also an acceptance that the education sector has a huge, if not the primary, role to play in this endeavour. From a labour perspective, education's role is to develop quality graduates, through its various programmes and institutions, that are better prepared and equipped with the desired workplace competencies. There is an emphasised importance on tertiary institutions to not only educate the technical, fundamental knowledge and skills of particular professions, but to also produce competencies within students that allow for faster and more efficient learning of the new, as yet unfamiliar competencies of the workplace. Thus education, and specifically in this case, higher/tertiary education institutions, and their educators, are key lynchpins in the graduate production system.

There are of course a number of measures and regulations that the Council on Higher Education (CHE), as well as its institutions, take to ensure the standard of graduates in South Africa, but for the most part these are based on assessment of knowledge through programme content and

assessment analysis, as well as regulations and administrative competencies. It becomes apparent from the above-mentioned problems that these measures, gap analysis studies and regulations fall short of producing what is required and/or desired by the working economy. They do not assess and monitor whether or not graduates are prepared to engage with the unfamiliar issues and contexts the “working world” produces. Dealing with a kaleidoscope of people and personalities with multiple motivations and personal goals, as well as balancing the goals set by employers, organizations, regulating bodies and governance, requires graduates to utilize their acquired knowledge and experiences from familiar contexts and design new and different mechanisms for success in unfamiliar situations.

These traits are what the Capabilities Approach (CA) to Human Development suggest are critical for not only the students, but every person, the institutions they work for, the economy and the country as whole (Deneulin & Shahani, 2009). CA offers insight into why and how education should be refocused on the establishment of these traits within students to better prepare them for entering the dynamic, fluctuating economy successfully. The focus of this study is to utilize CA as a conceptual framework to help develop a more contextualised concept of Independent Capability (IC) which describes different traits and competencies that South African graduates require, but currently are not sufficiently focused on or produced by South African higher education.

From my position in a Private Higher Education Institution (PHEI) in Johannesburg South Africa, I experience this lack of development in students all too frequently. Generally, students struggle to accept and work with different pedagogies, levels of responsibility, and self-directed development that are not clearly linked (at least in their minds) with achievement in an assessment. Developing young professionals for their chosen industry requires students develop competencies that enable them to challenge the unforeseen and unknown, and current perceptions of education are limiting that development. IC offers insight into how education can help engage students in the development of key competencies. The first step of the study is to develop the concept of IC within the context of South African private higher education and the work environment, and secondly to provide a way evaluate higher education practices, specifically pedagogical practices, in how they develop IC in students. To help identify IC engagement in classroom learning, the study utilizes Legitimation Code Theory (LCT) to develop an evaluation tool. LCT is

> *"a framework for exploring practices in terms of their organizing principles or 'legitimation codes'."* (Maton, 2018a, para. 1)

Essentially, LCT allows for qualitative observations to be mapped out to develop quantitative patterns, which in turn can be used to explain and describe current engagement practices in pedagogy. In combination with an external language of description of levels of engagement, the LCT evaluation tool allows for IC engaging practices to be revealed and evaluated. The opportunity to improve pedagogical practices in better development of IC in my students is highly enticing.

Returning to the conceptual framework, CA is an approach to human development. The Human Development and Capability Association (HDCA) distinguishes CA from other perspectives of development by two key points: the shift of focus from the economy to the person, and the shift in measurement from money to capability (Deneulin & Shahani, 2009, p. 23). It promotes the freedom and agency of people to live how they wish and become whoever or whatever they wish to be, and looks to tackle the social, environmental and personal factors that limit or prevent people from this (Robeyns, 2005). One such social factor that limits people to enjoy their "desirable life prospects*"* (Cohen, 1995, p. 275) is a lack of or poor quality education.

Of education, CA discusses that the value of education is limited "… when it is seen solely as the pursuit of knowledge and intellectual skills for their own sake" (Stephenson, 2012, p. 1). There is an ongoing perspective of education from educators and students alike that places the obtaining of the qualification certificate as the primary goal. This leads to educators teaching students to pass exams rather than engage in conceptual development. As Ramsden (in Biggs, 2003, p. 4) so adequately puts it "assessment is the curriculum as far as students are concerned" which perpetuates what Biggs (2003) calls "declarative knowledge" – knowledge that people can state yet not understand nor make it function within their environment. Biggs (2003) says that focusing on declarative knowledge is not sufficient for enabling the majority of students to use the knowledge to better impact their lives, and so there needs to be more of a focus on generating what he calls "functioning knowledge" – knowledge that students can put into action.

For CA education has far more value when it allows students the, "capacity to be effective in personal, social and working lives" (Stephenson, 2012, p. 1). The research from the Talent Shortage Survey (ManpowerGroup, 2015) indicates that there is a trend that employers in South Africa believe that a significant proportion of graduates are not displaying or demonstrating this

capacity at the required level. Education, according to CA should be judged on the extent to which it gives students

> *"…the confidence and ability to take responsibility for their own continuing personal and professional development. Prepares students to be personally effective within the circumstances of their lives and work, and promotes the pursuit of excellence in the development, acquisition and application of knowledge and skills"* (Stephenson, 2012, p. 1).

Unterhalter & Walker, (2007, p. 99) add that a CA approach to education focusses on the learners' ability to, "convert resources into capabilities" which again highlights the importance of the utilization of knowledge, skills and experience to perform tasks successfully. So CA offers insight into how to improve the quality of higher education graduates through the refocusing their education towards a more "capability-friendly" (Walker & Nguyen, 2015, p. 248) or "capability supporting" approach

This study recognises the role that education, specifically higher education, plays in the development of quality graduates. Moreover, it recognises that in order to address the skills gaps and mismatches found within the labour sector, education needs to have more impact and effectiveness on developing valued capabilities within students. Many previous attempts to solve this problem have, as discussed above, focussed on identifying competencies that education can target, yet while this has provided some theoretical structure, problems still persist. This study, utilising the conceptual framework of CA, looks to provide insight into how these competencies can be better developed not just in the curriculum, but in the students themselves.

1.2 Problem Statement

Higher education institutions in South Africa face a number of challenges when looking to educate and develop competencies within students. The introduction of university admission tests that focus on English comprehension and mathematical ability as well as the establishment of bridging courses to help students prepare for degree level academia are indicative of the waning faith of higher education institutions in the calibre of South African secondary education students. This stems from educational data such as the Trends in International Mathematics and Science Study (TIMSS), where South African eight grade students were ranked 2nd last for Mathematics

achievement and last for Science achievement out of 39 countries (Mullis, Martin, Foy, Kelly, & Fishbein, 2020). Additionally, from the World Economic Forums Global Competitive Executive Opinion Survey (*The Global Competitiveness Report 2019*, 2019) which asks employers their assessment of Mathematics and Science education in their country, employers gave an average rating of 2.6 out of 7 regarding education quality. This placed South Africa 128th out of 137 countries with the 4th lowest score on record.

Continuing into higher education, the concern by employers about educational quality (and the resultant quality of graduates) is unfortunately well supported. Scott, Yeld, and Hendry (in Wilson-Strydom, 2011, p. 407) showed that only 30% of students entering higher education institutions finished their 3 year qualification within 5 years, while 56% had dropped out. Similarly, van Broekhuizen, van der Berg, & Hofmeyr (2016) found that only 36% of students enrolled for degree programmes in 2009 finished their qualifications within 6 years. These statistics were again echoed by Department of Higher Education and Training (2019) when they released a report that indicated that of the students who enrolled into public higher education institutions in 2015 for a 3 year degree programme, only 31.9% of them finished the qualification in the allotted time. The percentage of graduates from 3-year diplomas during the same time period was lower at 26.2%. The data goes on to say that from 2008, after spending 10 years trying to graduate from a 3-year diploma course, the percentage of graduates from the initial intake that graduated was only 62.8%. The very notion that a small percentage of students are able to achieve a qualification within the expected time frame throws doubt on the general quality of the graduates.

Likewise, as discussed in the introduction, industries hold a similarly negative perception of graduates who apply for positions and require further learning, training and mentoring to help them better acclimatize to business and professional standards (ManpowerGroup, 2015). Engel-Hills, Garraway, Nduna, Philotheou and Winberg (2005) proposed that in transforming and packaging knowledge and practices from industries into a curriculum, there are gaps that appear that limit development of the desired knowledge and skills from the industries. Another potential reason was higher education cannot keep up with the high rate of change and development happening in industries and world of work. Both result in a typically negative perspective on new graduates within the working environment.

The obvious question that arises from all the points above is what is missing in higher education that negatively impacts the development of the students?

There are, of course, a number of opinions on the matter. Two such examples that focus on curriculum content and pedagogy are the adoption of more interdisciplinary and transdisciplinary research (or Mode 2 knowledge production), and the formalisation of Open Education Resources (OER) and its role in higher education. Winberg (2006) proposed that a Mode 2 knowledge production approach in higher education could hold answers to developing quality graduates in South Africa.

> *"Higher education policy makers have seen in 'Mode 2' knowledge production, the promise of a solution to the dual problems facing South African higher education: the need for skilled graduates for national reconstruction and global competitiveness, and the need for a transformed and equitable higher education system."* (Winberg, 2006, p. 160)

In terms of OER, in his paper *Learning for Development in the Context of South Africa: Considerations for Open Education Resources in Improving Higher Education Outcomes,* Baijnath (2018) explains how having a formalized, quality assured system of OER can help address or even remove many of the barriers to higher education access.

Another perspective looking to breach the gap between higher education and the labour market is the development of employer specific competencies. One example of such a competency is that of Emotional Intelligence (EI) and how it impacts employability. Pool and Sewell's definition (as cited in Coetzee & Beukes, 2010, p. 439) states employability…

> *"as possessing a set of skills, knowledge, understanding and personal attributes that make a person more likely to choose and secure occupations in which they can be satisfied and successful, to benefit themselves, the workforce, the community and the economy."*

Coetzee and Beukes (2010) found that EI had a significant impact and relationship with an individual's employability and career satisfaction within South African adolescents, thus EI would be a valuable competency to develop to prepare students for the labour market. Another competency focused response to improving students moving into the work force is the Work Readiness Scale (WRS), this time developed in Australia. The WRS was developed by Caballero, Walker and Fuller-Tyszkiewicz (2011) where they looked to firstly identify attributes and characteristics of work readiness and then create a scale to assess these in individuals. Their research found an initial 10 competencies that was then refined into 4 factors which they named personal characteristics, organisational acumen, work competence, and social intelligence. The objective being that by developing students in these factors, employability would improve.

The one opinion of specific interest to this study is the concept of Independent Capability (IC). Stephenson (2012) emphasizes that negative perspectives on the quality of graduates indicates a lack of independent capability within the students and graduates. A basic definition of IC is the ability of a person to manage and deal with situations and problems that are unfamiliar to them. Stephenson (2012) distinguishes this from Dependent Capability (DC) which speaks to the person's ability to deal and manage problems and situations that are familiar. Currently, the common perspective of education is that students focus on acquiring knowledge and skills which allows them to function in test-based situations that assess those specific skills and knowledge. They are instructed on how to solve problems and then replicate them when required. Thus, everyday students are reinforced with the notion that for every new situation or problem they face there will be prior information or knowledge to prepare them and thus familiarize them with future problems and situations. This continual reinforcement of DC and less focus on the development of IC makes the transition from the protected and structured environment of academia to the less protected and mercurial world of work far more challenging.

At this point, it is important to highlight the difference in meaning of the word "capability" that can often lead to confusion. In the educational, and more commonly used sense, capability is described as the ability to do something. This is the sense in which IC and DC were conceptualised. Within the conceptual framework of CA, capability is defined as the "*real and actual possibilities open to a given person."* (Deneulin & Shahani, 2009, p.32) This definition indicates that capability is more of a conceptual space in which people are then able to do things. Within the conceptual framework of CA, DC and IC would be identified as functionings. Functionings are "*the various things a person may value doing or being."* (Deneulin & Shahani, 2009, p.32). The abilities to solve problems in both familiar and unfamiliar environments are functionings that influence a person's capability within the working environment. It is this study's contention that IC is a critical functioning to achievement within the capability of work. For now, we shall focus on the concept of IC as it stands, but the placement and integration into CA will be discussed in more detail in Chapter 2.

As stated previously, CA values education that improves people's ability to convert their resources, both external and internal, into fulfilling their capabilities. In the disproportionate development of DC over IC in current education, students are limited in their ability to achieve their capabilities, specifically within the working environment. CA educational researchers have produced suggestions of how to improve educational structures and practices to better enable students to achieve their capabilities (Walker & Nguyen, 2015, Deneulin & Shahani, 2009:; Walker

& McLean, 2010). This study proposes that IC as a key functioning of work has a role to play in improving higher education practices in order to develop graduates who are better equipped to achieve their capabilities within the working world.

The problem this study addresses is two-fold. Firstly there are currently no purposeful or constructive definitions of IC beyond the vague and general one stated by Stephenson (2012) which makes operationalizing into education and the work environment both inaccurate and cumbersome. Secondly, there is no current assessment or evaluative tool to analyse levels of IC engagement in higher education. This study focuses on developing the concept of IC for Work (IC_w) in a South African, private higher education (PHE) context to address the first problem. It then develops two assessment tools to unearth and reveal IC practices and patterns in higher education.

1.3 Rationale

With the educational problems facing South Africa on many fronts, quality alternative pathways from the traditional public, general universities are necessary to find effective solutions. The National Development Plan 2030 (The National Planning Commission, 2011) has targeted a 70% increase in enrolments in the higher education sector by 2030; increasing from 950 000 to 1 620 000. It is recognized that in order to achieve this, the private higher education institutions (PHEI's) will have a significant role to play. According to Statistics on Post-School Education and Training in South Africa 2015 (The Department of Higher Education and Training, 2017) there has already been an increase to 1 132 422 enrolments, and so there is a real need for quality alternatives to public tertiary education to help provide more opportunities for students and provide a highly capable, more employable work force for the betterment of the South African economy. However, it is important not only to look at increasing enrolments but also to focus on the quality of the education provided.

In Higher Education Institutions (HEI's) there are two types of degree qualification; general and professional (Government Gazette, 2014, p. 32):

> *"The general Bachelor's Degree emphasizes general principles and theory as preparation for entry into general employment or for a postgraduate programme. The professional Bachelor's Degree prepares students for professional training, post-graduate studies or*

professional practice in a wide range of careers. Therefore it emphasizes general principles and theory in conjunction with procedural knowledge in order to provide students with a thorough grounding in the knowledge, theory, principles and skills of the profession or career concerned and the ability to apply these to professional or career contexts. The degree programme may contain a component of work-integrated learning. Some professionally-oriented Bachelor's Degree programmes are designed in consultation with a professional body and recognized by a professional body as a requirement for a licence to practice that profession."

Lower-level qualifications such as certificates and diplomas have their purpose leaning towards the professional side with the focus more on preparation for industry specific or vocational specific settings. IT programming, marketing management, hospitality management, and audio engineering are just some of the examples of industry specific qualifications on offer in South Africa. They tend to focus on developing industry-specific candidates that are ready for the rigors of working in their chosen industry. In order to stay focused for this study, professional type qualifications have been selected for investigation as they seem better placed to help ascertain the "workplace competencies" (ManpowerGroup, 2015) as their very purpose is more focused on developing professionals for the South African economy. This would allow for a deeper explanation and understanding of how IC_w should be constituted and developed within the South African PHE context.

Each HEI is required to register programmes and meet academic and administrative criteria set out by the CHE as a measure to maintain academic standards (Council on Higher Education, 2004). While these criteria set the guidelines for monitoring content, educator qualifications, methods of delivery and academic results, they fall short of monitoring the ability of the candidate to succeed in solving unfamiliar tasks in unfamiliar situations (i.e., IC) found in the working world. This study argues that the development of IC_w is of utmost importance to the development of the individual student, businesses, industries and the South African economy. It also proposes that a method of assessing the presence of and engagement with IC_w within educational contexts could provide a focal point for improving the quality of graduates. By identifying areas in the curriculum, pedagogy or assessment that are weak in IC_w engagement, institutions can then implement educational interventions to assist the student in developing desired functionings so that the student enters the workforce with the highest potential for success. This could also help the CHE identify HEI's that are administratively functional but educationally weak and guide the development of CA based educational interventions at an institutional level.

While these institutional and macro systematic perspectives are reason enough to pursue the development of IC_w in students, the main reason is the development of the concept of IC_w for the individual student. In South Africa where unemployment is a serious reality – 30.1% in the first quarter of 2020 (*Quarterly Labour Force Survey: Q2 2020*, 2020) – South African students are faced with an increasingly difficult career situation. By having a more purposeful and detailed understanding of IC_w, learners can take more control and ownership of their own educational development to achieve an improved chance to impress potential employers, or to create their own business. Not just with marks achieved, but in problem solving, flexibility, social understanding, resilience and confidence to take on the unknown. i.e. *workplace competencies*. Another important point is that while there appears to be at least some effort to understand the importance of such workplace competencies development in South African education – highlighted in the Graduate Attribute Report (Griesel & Parker, 2009) – there seems to be a problem of how to implement them into the educational curriculum, pedagogy and assessment effectively. It is this study's contention that with the establishment of a more developed and contextualised concept of IC_w comes a new opportunity for successful implementation.

1.4 Objectives of the study

The objectives of the study are:

1. To develop the concept of Independent Capability for Work ($IC_{w)}$ and construct a consolidated, detailed, purposeful conception.
2. To create an assessment tool, or tools, to measure levels of IC_w engagement in education.

1.5 Research questions

The research questions for this study are:

1. What are the competencies/functionings that constitute IC_w as a concept in the South African private higher education context?
2. How can we assess the levels of IC_w engagement within education?

1.6 Significance of study

The Three Worlds framework provided by Mouton (2001) is a tool used to describe the translation between real world and research. As the name suggests there are three levels to this framework that helps clarify the relationship between the aspects of research and the real world. This study will use this framework to discuss the significance of the topic and its potential findings to the field of Higher education in South Africa.

The first world of the framework is that of everyday life and lay knowledge. This is the world in which individuals use the knowledge gained from the learning and experiences gained from living. Being able to navigate life on a day-to-day basis requires knowledge and understanding at a practical level, but also, through reflection, that knowledge and understanding can be deepened and performance improved. This really focuses on how the topic of research can have impact on the daily engagement of life tasks. The concept of IC_w could have a great impact in this world. The study proposes that through the development of IC_w in individuals through IC_w focused education, students will be much better equipped and prepared for the world of work. From an educator perspective, the study looks to offer insight in pedagogical practices that can improve engagement with IC_w. Through discussion of CA and IC_w, educators are offered the opportunity to expand and reflect on their own educational perspectives and practices from a new perspective.

The second world is that of science and scientific research. According to Mouton (2001) the key distinction between world 1 and world 2 is that research takes phenomena in world 1 and then makes it an "object of inquiry" (Mouton, 2001, p. 138). The goal of learning and reflection in real life is to help cope better with the requirements of day-to-day living. In world 2, there is a systematic and rigorous approach to research in order to gain a deeper, more complex understanding of phenomena. It is in this world that the study offers its most significant contributions.

As an approach to human development, CA has seen much discussion and research within the realms of social justice and policy development, and while there has been a move towards CA research in, and application to, education (Buckler, 2016; M. C. Nussbaum, 2006; Unterhalter & Walker, 2007; Walker & Nguyen, 2015) this has happened relatively recently. Through the development of IC_w, this study offers the potential of clear and strong pathway to implementing CA principles in educational discourse and practice. A more concrete contribution to the education field are the assessment tools that are developed from this study.

The first assessment tool provides a method of assessing engagement of IC_w within pedagogical practices, which, over time, could offer even greater insight into how to better generate IC in students. The assessment utilises the framework of Legitimation Code Theory (LCT) (Maton, 2014a) and looks to advance LCT use within educational research. The second assessment tool focuses on enabling educators to reflect and alter educational thinking and practice immediately.

The final world is that of meta-science, where the philosophies of methodologies and research that influence and shape decisions during the study reside. While the goals of this study are not specifically aimed at discussing meta-science disciplines, it does utilise some in its processes. CA, for instance, is a deeply humanist perspective (Deneulin & Shahani, 2009) and as such through the discussion and linking of CA philosophy to educational practice, the study does promote humanistic principles. In terms, of research, the study utilises the Exploratory mixed methodology (Creswell & Clark, 2011) for its data collection. The Exploratory mixed-method design uses quantitative data to help support qualitative findings in the researching of an as-yet-unknown concept. This two-stage methodology is recommended when looking to develop a concept that has little or no research surrounding it. This is very much the case for IC_w and thus the most suitable methodology to use. The also structures a model of research methodology that can help generate IC_w conceptualisations across a variety of contexts. In this way, the study offers other researcher a methodology for developing their own contextualised – and therefore more relevant – conceptualisation of IC_w.

It is the contention of this study that CA and IC could play a predominant and successful role in improving the running and management of education, the development of educational discourse and theory, and quality of graduates within the South African context, specifically within the private higher education sector.

1.7 Conclusion

This chapter has provided background and context, as well as the objectives of the research. It has discussed how the South African labour market has indicated a lack of confidence in the workplace competencies of graduates emphasised by a high skills mismatch percentage (*Mission Talent Mass Uniqueness: A Global Challenge for One Billion Workers*, 2019). South African education – and more specifically higher education – plays a fundamental role in addressing and

improving the situation. Research has been conducted in the working world into what is lacking or desired in graduates, however the locus of change falls within education, thus, the research of the study is conducted within the higher education sector – specifically at PHEIs.

This study proposes that CA offers a different perspective of education and offers opportunities for such improvement. CA focuses on human development with the goal of impacting policies, leadership and education (among other sectors) to ensure that each individual is capable of achieving their valued life states and goals. Within this conceptual framework, this study offers the concept of IC_w as a way of channelling the principles of CA more concretely into educational practices. This chapter has explained how the current conceptualisation of IC is too general and vague a concept in its current conceptualisation, and so the focus of this study is to develop the concept into a more detailed, specific and implementable iteration (IC_w) that can be utilised within South African higher education, beginning with PHEIs.

Chapter one has introduced the subject of research, the conceptual framework of CA, the concept of IC and the significance of the study using the Three Worlds Framework (Mouton, 2001). The rest of this thesis is broken down into 5 other chapters.

Chapter two conducts the review of literature beginning with a historic look at origins of CA, its strengths and weaknesses, and how it has evolved over time, gaining more and more support through its development in a variety of disciplines. It then discusses the link between CA and education as well as the place and position the concept of IC has within both CA and education. This then establishes IC_w as a pathway for the incorporation of CA principles in improving South African higher education. The chapter continues by expanding the understanding of IC through the cognate fields of Successful Intelligence and Emotional intelligence, which provides areas of focus for a deeper understanding of IC. This then provides the structure for the research design and methodology. The final part discusses theory surrounding educational assessment to provide guidance for the development of an assessment of IC_w engagement in education.

Chapter three provides the Research Methodology and Design which provides a context of research and the decisions made throughout the process. The research paradigm of the study is set out, along with background on both qualitative and quantitative research. The research methodology for the study is an Exploratory Mixed-Method design. An exploratory mixed method is explained and justified as a good choice for the research whereby the concept being researched is either unknown or has little existing data or research available. Details of the research such as participants, sampling and research strategy are discussed, while also explaining how aspects of

validity, ethical considerations and quality will be ensured. It will also detail the qualitative (documents analysis, semi-structured interviews) and quantitative (highly structured questionnaire) methods of collecting data and the steps taken in analysing the findings.

Chapter four is where the findings of the research are presented from the document analysis, the semi-structured interviews, and questionnaires conducted. This chapter explains the findings of each part of the research in detail and provides links and evidence back to the research material. This chapter does not look to refine or explain the findings but rather sets out the findings as they arose through the research process, including incidental findings that are not necessarily in line with the focus of the study. The findings from the 5 PHEI document analyses are tabulated and form the basis for the development of the interview questions. The 9 faculty interviews were broken down into 3 broad sections and each of the three broad sections are discussed in detail. The key section of this chapter is the detailing and explanation of the valued competencies that arose in the interviews. From the interviews the highly structured questionnaire was developed and the valuations of the competencies from the questionnaires from the 120 student participants are presented and explained.

Chapter 5 provides the discussion of the findings from Chapter 4 and looks to situate the findings within the literature and conceptual framework of CA. Moreover, this chapter stipulates the newly constructed conceptualisation of IC as well as presents the assessment tools that can be used to measure engagement with IC_w in educational practices.

Chapter 6 provides concise answers to the two research questions of the study by providing a clear conceptualisation of IC_w in the South African PHE context as well as the use of the two assessment tools. It also provides insight into the journey of research through a self-reflections on the various aspect of the study, finishing with some recommendations for the future of IC in education.

Chapter Two – Review of Literature

2.1 Introduction

This study argues that South African graduates require a variety of skills, abilities and characteristics that allow them to facilitate and manage high complexity problems within unfamiliar contexts – specifically those within the context of work environments – that are currently not being developed sufficiently in the current South African educational system. It is also this study's contention that a lack of "technical and workplace competencies" (2015 Talent Shortage Survey, 2015, p. 10) described in the Talent Shortage Survey can in large part be attributed to a lack of Independent Capability (IC) within graduating students, and that it is this lack of IC that plays a key role in the perpetuation and deterioration of the confidence in the quality of the South African graduate. In order to address this apparent lack of IC, this study adopts the conceptual framework of CA.

The Capability Approach was first developed by Amartya Sen (1993) as a way of viewing a person's success not as a financial measure but rather to what extent they are living a life that they desire and value. CA is a perspective of human development that focusses on giving individuals the conceptual space to achieve what they wish; and be who they wish to be. It also focuses on the social and political arrangements and resources that constrain and open the capability of individuals. There are factors that limit the *capability space* and therefore the person's ability to live and be the things they value. It is this study's argument that by focusing on the development of IC, an individual is better prepared to achieve their valued life prospects.

This review of literature will discuss and set out CA as the theoretical framework for this study. It will clarify the distinction between the capability in CA terms, and it's more quotidian, educational use. It will explore the concept of IC to flesh out the aspects of IC that can be linked with the *technical and workplace competencies* named in the Talent Shortage Survey and then construct a more contextualized conception of IC within the capability of work (IC_w). It will also detail how IC_w fits in with CA, and how IC_w is a critical functioning to achievement in the capability space of work. The discussion will then move on to the assessment and the guiding principles of design that will guide the development of an IC_w assessment tool.

In recognizing the complexity and potential confusion of CA in relation to IC and its place in education, the study will look to develop the conceptualisation in a purposeful, step by step manner. This will allow for a clearer understanding of how IC_w fits into the CA framework.

2.2 The Capability and Capabilities Approach

2.2.1 The Capability Approach

Amartya Sen discussed the concept of a *capability* approach in a number of his papers during the late 1980's and really introduced it in 1993 in his article published in The Quality of Life (Nussbaum & Sen, 1993). Sen is a Nobel Memorial Prize winner in Economic Sciences; an economist who developed a different means to socio-economic valuation other than through financial measures such as income and expenditure (Sen, 1993). According to one of Sen's colleagues, Martha Nussbaum (2000), Sen focused on capability as a space to compare factors in the quality of life. Rather than focusing on the income and a person's satisfaction measures, Sen focused on what people are actually able to do. Sen insists that social equality and inequality are best discussed in this space. CA is, at its core, an approach to human development that prioritizes social justice and equal opportunity across populations as a way to combat poverty and prioritize wellbeing. It is a perspective that has fundamental implications for a variety of fields including economics, policy development, leadership and education. The Human Development and Capability Association (HDCA) distinguishes CA from other perspectives of development by two key points: the shift of focus from the economy to the person, and the shift in measurement from money to capability (Deneulin & Shahani, 2009)

Traditional perspectives of development determine successful development through the ability of people to sustain and promote economic growth (Deneulin & Shahani, 2009). If a person is able to achieve a level of income that allows them certain freedoms and the ability to contribute back into the economy through spending, that person is deemed to be – to a lesser or greater extent – a success. The measure of this success then is based on the economy of the area of residence and work, the industry the person works in and the national economy. The key indicator of this is monetary spending power both current and for the future. Sens's CA shifts the focus of analysis away from macro analytics such as the economy to the micro perspective of the development of the individual. It looks at what a person is capable of becoming rather than how they contribute to a larger collective.

Sen's CA offers a different perspective on economic policy and moves away from the mechanical processing of financial figures towards a more humanist view. The international Humanist and Ethical Union (The International Humanist and Ethical Union, 2017, para. 1) defines humanism as:

> *"…* a democratic and ethical life stance that affirms that human beings have the right and responsibility to give meaning and shape to their own lives. Humanism stands for the building of a more humane society through an ethics based on human and other natural values in a spirit of reason and free inquiry through human capabilities. Humanism is not *theistic, and it does not accept supernatural views of reality."*

The key aspects here are the agency and responsibility given to people about shaping their own lives. Emirbayer and Mische (1998) discuss how agency is itself a complex notion and arrived at the following as a definition:

> *"…human agency [is] a temporally embedded process of social engagement, informed by the past (in its habitual aspect), but also oriented toward the future (as a capacity to imagine alternative possibilities) and toward the present (as a capacity to contextualize past habits and future projects within the contingencies of the moment)."* (Emirbayer & Mische, 1998, p. 962)

Sen's vision looks to human agency as a key point of social justice and thus by focusing on people's capability to achieve individually valued functionings as an economic strategy, people are not only empowered to create and generate their own wellbeing, but they are given the best possible social environment that supports them. Sen is also a supporter of Rawls' Political Liberalism which centres on a concept of justice that stems from the agency, choice and rationale of members of society with respect to their own wellbeing and benefit (Hart, 1973). These philosophical positions are both highly attractive to people as they place power of agency within their hands. CA is similarly attractive as described by Cohen in (Gasper, 2006, p. 3) in four main points:

1. *"The capability approach captures the intuitively attractive idea that people should be equal with respect to effective freedom and so has some initial plausibility.*
2. *Because it is attentive to the fact that the preferences and values are sometimes adaptive, it compares favourably with the views that focus on "subjective" achievements.*

3. *Because it is attentive to issues of responsibility and diversity of aims, it contrasts favourably with views that focus on achievements (however understood.)*
4. *Because it is attentive to diversity in abilities to transform means into achievements, it is preferable to views that focus on equality of means."*

While these are attractive features to people looking to regain autonomy and agency over their own lives, problems arise with regards to the implementation and priority of capabilities and functionings to groups of individuals and societies. Sen was a supporter of the Rawls' prioritizing of liberties which describes how, while each person in society has an equal right to liberty (among others), when looking at mechanizing this into larger societies, lesser rights should be should be limited as long as it is "…to the greatest benefit of the least advantaged…" (Hart, 1973, p. 536). The problem of operationalizing from these philosophies extends itself into Sen's CA.

2.2.2 Criticisms of CA

It has been suggested that Sen's work is not complete, and several problems are highlighted which I will summarize in two broad points. The first is that of vagueness. According to Gasper (2006, p. 1), Sen's work has, *"ambiguities and unclear boundaries",* and as a result there are a number of evolutions from his work that have taken the core idea of the CA in multiple directions. This is most clearly indicated by the use of terms and vocabulary that diverge substantially from their everyday meanings and use. As a result of this there are a variety of terms that need to be defined and redefined which leads to confusion and misinterpretations. For instance, capabilities in general definitions refer to actions a person can do, however in the CA capabilities are a conceptual space in which functionings can occur. This distinction will be discussed in more detail in section 2.2.4. The second major issue is that of operationalization. Operationalization refers to the ability to apply the approach to the structured, real world environment. Essentially moving from abstract theory to concrete practice. This can refer to any area of focus whether it be economics, politics, social justice, or education.

Sen's concept of capability forms around the idea of opportunity namely the opportunities available to people or groups of people to live a valuable life and become what they wish to be. A *valuable life* in this context is an extremely subjective concept that is specific to individuals and is comprised and defined by several variables such as cultural, societal and personal values, ethics and morals. This is highly problematic in operationalization, as individuals and groups value different opportunities at different levels of priority. Sen proposes that people should have the ability to face, "equally desirable life prospects", but given the varying values of a pluralist society,

legislating or developing a system that achieves this is almost impossible (Cohen, 1995, p. 275). In his review of Sen's book *Inequality Re-examined*, Cohen (1995) points out the difficulty in systemizing capabilities for structural implementation. In essence, regardless of how intricate a process is to offer certain agreed upon capabilities and functionings to a society, these will be limited by the current values and capabilities within the society. For example, teachers' pedagogical decisions, experience and education are directed from their own valuations on importance, thus limiting students in similar ways. In this regard, *equally desirable life prospects* are limited and denied due to the class environment. This is a relativist problem to be sure, but Sen does little to formulate responses to this, opting instead to maintain a philosophical stance promoting the altruistic nature of CA (M. Nussbaum, 2000).

Comim (2001) goes into depth regarding the problem with operationalizing Sen's CA and highlights three main practical problems. The first is that of data collection. Data collection for an overall application of CA is extremely difficult. The variety of sources, valuation and even methods of collection all are cause for concern as data gathering is essentially geographically or culturally specific. He goes on to say that due to the broadness of CA, the amount of different data sets and sources of information can vary substantially depending on the manner in which CA is to be operationalized. For instance, macro-level data is generally aggregated which could lead to oversimplification of results as well as a move away from some (although not the majority) societal concerns or values. Aggregation is the second of the points, which looks at the combining of findings and valuation to allow for an estimated and legitimate decision-making process. CA embraces diversity and pluralism and as a result of aggregation, the very act of operationalizing CA moves further away from its core theoretical standing. The third discussion point is that of weighting and incompleteness. One of the key elements of Sen's CA is the ability *to "…yield definite answers even there is no complete agreement on the relative weights to be attached to different functionings."* (Comim, 2001, p. 12) Operationalization would require some consensus with data to support which capabilities are to be prioritised or are more important to implement or promote, however CA doesn't require or ultimately desire complete agreement. Rather the use of CA would be to highlight some of what is important to the community and the individuals and act without any required consensus. This puts decision making and policy development at quite a disadvantage as due process is required with justifications and allowances from those within the society. As such, the ability to operationalize Sen's CA into current economic and political environments is highly problematic. The vagueness and openness to include multiple perspectives, valuations and inputs resists any application to real world governance.

It is important to note that the vagueness of Sen's CA was purposeful in nature so that CA could be altered, shifted and refocused for specific use in some areas. From Sen's perspective, capabilities should be determined and agreed by stake holders at local levels allowing their immediate communities to determine their measures of value. Even at this micro-level there will be some subjectivity on the agreed upon capabilities, but this can be worked with and managed more easily within the specific community. From this perspective, the vagueness of Sen's CA can be seen as a strength allowing various communities the space and flexibility to value their own capabilities. Martha Nussbaum (2000), a collaborator and colleague of Sen, utilized this flexibility to evolve Sen's *Capability Approach* into a more pragmatic *Capabilities Approach.* While Sen's CA stemmed from a "welfare economist" perspective, Nussbaum's take on CA is underpinned by an Aristotelian philosophy and is focused on the establishment, development and maintenance of human rights.

2.2.3 The Capabilities Approach

To try and tackle the issue of operationalization this study will focus on one of the key evolutions from Sen's capability approach, and that is Nussbaum's *capabilities* approach (2000). In her book entitled *Women and Human Development: The Capabilities Approach* Nussbaum (2000) discusses both her agreements and departures from Sen's original work. The key distinction for the purposes of this study is the formalization and solidifying of what capabilities are and how they interact to provide a foundation for generating political principles. Nussbaum provides an in-depth understanding of the conceptual space of capability and moves towards more clarified and distinct concepts that allow for a clearer route to operationalization. It is this movement to the operationalization of CA that lends support and guidance to this study's move to operationalize CA within the sphere of education in the South African context. Nussbaum starts from the concept of human dignity as discussed in Sen's capability approach:

> *"The core idea is that of the human being as a dignified free being who shapes his or her own life in cooperation and reciprocity with others, rather than being passively shaped or pushed around by the world in the manner of a "flock" or "herd" animal. A life that is really human is one that is shaped throughout by these human powers of practical reason and sociability."* (Nussbaum, 2000, p. 72)

This take on human dignity highlights the need to focus on individual capabilities as opposed to groups, families, or societies. It highlights that individual agency and capability are required for the fulfilment of human dignity. For Nussbaum, in order for individuals to experience true human

dignity, social structures and policies should focus not only on producing resources for people to utilize but should also produce the actual *capability space* for individuals to achieve and do what they hold to be important. Where Nussbaum diverges from Sen is that she argues that even though capabilities and functionings are individually centred, there is the ability to argue for the existence of common capabilities and functionings that are applicable to all humans. She argues that when determining the capabilities and functionings that are valuable or desirable or required for an individual there is a natural comparison effect that is required to deem whether these are in fact valuable / desirable / required. For individuals to decide whether or not capability or functioning is what they want, they automatically fall to a comparison with capabilities and functionings of others. According to Nussbaum, this space of comparison is the space of central human capabilities that spans different cultures, regional characteristics, and classes. Moreover, Nussbaum argues that there are certain necessary conditions such as social justice and human rights that frame and even limit individuals' capabilities and functions. Thus, some central capabilities exist that are foundational to being human and interlace the capabilities and functionings of all humans. Nussbaum surmises that there are certain "central elements of truly human functioning that can command a broad cross-cultural consensus" (2000, p. 74). In other words, there are certain human functionings that apply across all different cultures. Nussbaum then provides a list of 10 such functional capabilities:

Table 2. 1 Nussbaum's Central Human Functional Capabilities

Number	Capability	Functionings
1	**Life**	Being able to live to the end of a human life of normal length; not dying prematurely, or before one's life is so reduced as to be not worth living.
2	**Bodily Health**	Being able to have good health, including reproductive health; to be adequately nourished; to have adequate shelter.
3	**Bodily Integrity**	Being able to move freely from place to place; having one's bodily boundaries treated as sovereign, i.e. being able to be secure against assault, including sexual assault, child sexual abuse, and domestic violence; having opportunities for sexual satisfaction and for choice in matters of reproduction.
4	**Senses, Imagination and Thought**	Being able to use the senses, to imagine, think, and reason – and to do these things in a ''truly human'' way, a way informed and cultivated by an adequate education, including, but by no means limited to, literacy and basic mathematical and scientific training. Being able to use imagination and

		thought in connection with experiencing and producing self-expressive works and events of one's own choice, religious, literary, musical, and so forth. Being able to use one's mind in ways protected by guarantees of freedom of expression with respect to both political and artistic speech, and freedom of religious exercise. Being able to search for the ultimate meaning of life in one's own way. Being able to have pleasurable experiences, and to avoid non-necessary pain.
5	**Emotions**	Being able to have attachments to things and people outside ourselves; to love those who love and care for us, to grieve at their absence; in general, to love, to grieve, to experience longing, gratitude, and justified anger. Not having one's emotional development blighted by overwhelming fear and anxiety, or by traumatic events of abuse or neglect. (Supporting this capability means supporting forms of human association that can be shown to be crucial in their development.)
6	**Practical Reason**	Being able to form a conception of the good and to engage in critical reflection about the planning of one's life. (This entails protection for the liberty of conscience.)
7	**Affiliation**	**A)** Being able to live with and toward others, to recognize and show concern for other human beings, to engage in various forms of social interaction; to be able to imagine the situation of another and to have compassion for that situation; to have the capability for both justice and friendship. (Protecting this capability means protecting institutions that constitute and nourish such forms of affiliation, and also protecting the freedom of assembly and political speech.) **B)** Having the social bases of self-respect and non-humiliation; being able to be treated as a dignified being whose worth is equal to that of others. This entails, at a minimum, protections against discrimination on the basis of race, sex, sexual orientation, religion, caste, ethnicity, or national origin. In work, being able to work as a human being, exercising practical reason and entering into meaningful relationships of mutual recognition with other workers.
8	**Other Species**	Being able to live with concern for and in relation to animals, plants, and the world of nature.
9	**Play**	Being able to laugh, to play, to enjoy recreational activities.

10	**Control over One's Environment**	A. Political. Being able to participate effectively in political choices that govern one's life; having the right of political participation, protections of free speech and association. B. Material. Being able to hold property (both land and movable goods), not just formally but in terms of real opportunity; and having property rights on an equal basis with others; having the right to seek employment on an equal basis with others; having the freedom from unwarranted search and seizure.

The formalization of these capabilities can then form the basis for the production of policies and guidance of politics to help individuals of a community or nation to achieve human dignity through improved capability development, and it is this key operationalization of CA that distinguishes Nussbaum's version from Sen's. Of particular relevance to this study, the central human capability of practical reason speaks to an individual's ability to reflect on and plan their own lives. Education – deemed by many as a fundamental human right – looks to develop the functionings that enable people to better utilise and achieve the capability of practical reason. It is the proposal of this study that IC_w is a key functioning in this regard within the capability of work.

Another important development from Sen is that while Sen supports the prioritization of capabilities (through his support of Rawls' prioritization of liberties) Nussbaum believes that capabilities need not be prioritized and are equally fundamental. Gasper (2006) sums up the distinction between Sen's capability and Nussbaum's capabilities:

> *"'Capability' is the full set of attainable alternative lives that face a person; it is a counterpart to the conventional microeconomics notion of an opportunity set defined in commodities space, but is instead defined in the space of functionings. 'Capabilities," in contrast, conveys a more concrete focus on specific attainable functionings in a life, and connects to ordinary language's reference to persons' skills and powers and the current business jargon of 'core capabilities'."* (Gasper, 2006, p. 1)

2.2.4 Capabilities and functionings

In CA, the concept of capability is a broad concept that encompasses a number of notions and it is this very trait that allows for the interconnected use between fields of focus. The HDCA (Deneulin & Shahani, 2009, p.32) define capabilities as *"the freedom to enjoy valuable functionings"* and can be described as the *"real and actual possibilities open to a given person."* The *functionings* referred to above is taken from (Sen in Deneulin & Shahani, 2009, p.32) when

he says that functionings are "*the various things a person may value doing or being."* In other words, functionings are any action or state of being that are valued by the individual themselves and the people within the environment. Gasper (2006) adds even more clarity to the distinction by explaining, *"… capability… the valuation of the set of life paths a person could follow…. functionings: how people actually live"* (Gasper, 2006, p. 10).

In essence, Sen's capability is a conceptual space in which people can achieve, enjoy and be the functionings they value. To avoid future confusion, this study will refer to Sen's capability as the *Capability Space*. This falls in line with Gasper's (2006) description of capability as a *"space of functionings."* Thus, the capability space speaks to the real and actual possibilities of an individual to utilize and enjoy his or her functionings.

Roebyns (2005) gave an example to help provide clarity when she discussed how a person may have a bicycle which is a resource that provides a certain functioning of mobility, however if the person cannot ride the bicycle due to some form of disability, that person lacks that capability of mobility. It is also important to note from this that a person's capability is dependent on the person's functionings that support that capability. Robeyns (2005) goes on to discuss how there are three categories of influencing factors on a person's functionalities, and therefore capabilities, namely social, environmental and personal conversion factors. These factors influence the ability of individuals to convert the available goods and resources into their valued functionings. This is echoed by Hart (2009) (as cited in (Wilson-Strydom, 2011, p. 411) when she says:

> *"The capability approach draws our attention to the myriad of complex social, personal and environmental factors which affect what a person is able to (and chooses to) do and be."*

The social factors include political policies, social norms, relationships, and other such concepts. So, if the person has a bicycle but there is a law that prohibits riding bicycles during the week, the functioning is prohibited as well. The environmental factors are any such factors that impact the immediate environment, such as not having roads on which to ride the bicycle. Personal factors refer to the characteristics of a person that help or hinder functionings, such as the disability which stops a person from riding a bicycle, or not knowing how to ride the bicycle. CA looks to explore these conversion factors so that individuals are better placed and able to experience functionings successfully and thus increase/improve their capabilities. Taking social conversion factors as an example, CA explores methods of changing and altering the focus and effectiveness of social boundaries, norms and power relationships within societies and how they impact the capabilities

of the people within it. This study will focus on a personal conversion factor – education – with the goal of improving an individual's ability to achieve in the capability of work in the working environment. This study will focus on the conceptualization of IC_w as a key/critical functioning for achieving the capability of work in the progress and development of their careers.

CA from Sen and Nussbaum's positions are focusing on developing CA from a macro perspective by the changing and the alleviation of social and environmental factors that restrict people's capability space. This alleviation should allow individuals a greater capability space to enjoy and realize their valued functionings. Sen's CA developed a different perspective of economics which introduced the idea of a space for human development: capability. Nussbaum then reframed it within the topic of human rights and provided some examples of central human capabilities to help operationalize the capability space for political use. She further refined the concept of functionings as actionable components that impact on the capability space.

More than just offering a starting point for the serious discussion of CA within social policy developments at a macro level, the development of the 10 central human functional capabilities opened a pathway of enquiry that elicited the development of other capability and functionings sets within a variety of fields. Walker & McLean (2015) provided a summation of their 2013 book titled *Professional education, capabilities and the public good: The role of universities in promoting human development* (2013), which detailed how they extrapolated 8 public-good professional capabilities from the valued functionings of five higher education departments in South Africa. While there were admittedly varying emphases on capabilities depending on the field and various behaviours and attitudes towards those capabilities, these 8 capabilities were found to be common across all of the departments within the study, demonstrating that shared functionings are perhaps less difficult to develop within narrower contexts such as higher education.

This study looks to develop CA from the micro perspective by developing a deeper, contextualised conceptualisation of IC (IC_w) as a critical functioning of performing in the working environment and discussing how this functioning can be developed through IC-engaging practices. It is here that this study makes the attempt to refine the concept of IC further by focusing on the development of people's ability to utilize and develop functionings.

2.3 CA and Capability in Education

While CA views capability as a capability space, education has a different conceptualization. I will momentarily step back from CA and look at the far more concrete definition of capability from an education perspective and will then discuss the relationship between the CA conceptualization of capability and education's conceptualization of capability. Stephenson (2012, p. 2) provides the working definition of capability within an educational context:

> *"Capability is an integration of knowledge skills, personal qualities and understanding used appropriately and effectively - not just in familiar and highly focused specialist contexts but in response to new and changing circumstances."*

This definition focuses on an individual's ability to utilize their internal resources effectively to respond to challenges in their lives. Here we see that capability within educational terms remains about potential and possibilities but, in this instance, is more focused on achieving those potentials and possibilities. It is also important to note a distinction implied in the latter part of the definition. Stephenson (2012) discusses how there are two types of capability. Dependent Capability (DC) is the ability of people to solve familiar problems in familiar contexts. This capability is dependent on prior instruction, knowledge and practice being in place.

The other capability is called Independent Capability (IC). IC refers to the ability of individuals to analyse and work towards solutions to problems in situations that are unfamiliar without having the familiarity that comes from preparation as found in DC. According to Stephenson (2012), the ability to solve problems that have never been experienced or learned within contexts or situations that are unfamiliar successfully distinguishes ineffective people from effective people. In other words, if a person has a strong IC they tend to become far better at integrating and enacting previously learned technical knowledge and skills to generate workable solutions to the as-yet-to-be-experienced problem. The key difference here is the uncertainty of a positive outcome – or any outcome at all. Thus, having IC also requires a self-belief and confidence with one's technical skills and knowledge. As mentioned in Chapter 1, within the framework of CA, both DC and IC would be considered individual functionings – things that people value doing or being. While IC as a concept can be applied in a variety of contexts, it is the position of this study that it is a critical functioning to achievement in the capability of work. For clarity, the study will be focusing on developing a deeper conceptualisation of IC for Work (IC_w) within the context of PHE in South

Africa. IC_w represents the ability to solve unfamiliar problems in unfamiliar working environments – a more work-centred conceptualisation of IC.

It is also the position of the study that this critical functioning is not being developed adequately enough in current educational practices, while the functioning of DC is being developed robustly. It does this by providing lessons, textbooks, worksheets and homework as well as detailed rubrics for assessments that spell out very clearly what is expected of the student. Educators provide information on the context of problems as well as methodologies to solve problems. Educators explain how assessments will be done in the forms of tests and exams so that the students are prepared for them, while past papers in preparation for exams allow students to become familiar with the format and level of questions to be expected. While all of this exists with solid support from research, educational minds and institutions, this focus generates functionings within students that are dependent on them knowing or being familiar with both the problems being faced and the context and environment surrounding them. This study contends that– as discussed earlier in the Problem Statement – that it is this heavy focus on DC development and not enough on IC development (especially in the work context, namely, IC_w) where the South African educational system is falling short in Labour confidence. While DC is generated through a variety of means, IC_w in students is not being developed sufficiently. This results in students who are primarily prepared to solve problems for which they have a prior context or experience, but are limited when dealing with new, unforeseen or as-yet-to-be-experienced situations and problems. This is reflected in the number of problems that higher educational institutions and workplace employers are having with new incumbents (2015 Talent Shortage Survey, 2015, Griesel & Parker, 2009, Wilson-Strydom, 2011) . Thus, to justify the IC_w focus of this study, I argue that if we accept that the DC is being well nurtured, or at least is the primary focus, within the current educational system while the IC component is not, the focus of improving the ability of graduates to achieve in the workplace falls to the improvement and development of IC_w within individuals.

The current understanding of IC is somewhat vague and thus requires an attempt to clarify. To start this, the Dearing report in Stephenson (2012, p. 6) gave this definition of IC. IC is:

> "… *the development of higher-level intellectual skills, knowledge and understanding' because it 'empowers the individual - giving satisfaction and self-esteem as personal potential is realized' and 'underpins the development of many of the other generic skills so valued by employers and of importance throughout working life."*

What this definition refers to is the use of learned and practiced knowledge and skills to develop new ways of thinking and dealing with problems that empower the individual through satisfaction, self-confidence and self-esteem, which then, in turn, provides them with the courage, belief and improved judgement that enables greater IC in the future. Taking this point further, it is then imperative that any educational system that wishes to produce graduates who are better equipped to enter into the dynamic, unfamiliar, "real" world of work – where instructions are vague or unavailable and outcomes hardly guaranteed – focuses on the development of IC_w within each of its students.

But even with this clarification, the concept of IC still seems quite intangible. In order to gain greater clarity of IC, there is a need to consider and emphasize its relationship with the concept of competence.

> "*Capability is a broader concept than that of competence. Competence is primarily about the ability to perform effectively, concerned largely with the here and now. Capability embraces competence but is also forward-looking, concerned with the realization of potential."* (Stephenson, 2012, p. 3)

This suggests that competence is the ability of a person to perform actions effectively. In terms of IC, *competence* refers to the performance of an individual in those competencies that enable the individual to confront problems and challenges within unfamiliar contexts. Competence in relation to IC is a measure of performance in those specific competencies that constitute IC, with the IC of an individual being a holistic representation of the individual's ability to integrate those performances effectively within unfamiliar contexts and problems. This is represented in the left side of the figure below. So, IC is essentially one's ability to integrate and utilize various competencies effectively, however, the competencies which this study focuses on are those *workplace competencies* linked to the professional development of the individuals (IC_w) within the framework of CA. This is represented on the right side of figure 2.1. IC_w is a functioning that refers to the ability of an individual to integrate performance in other work-based functionings that are linked to achievement within the capability space of work represented by the circle outline.

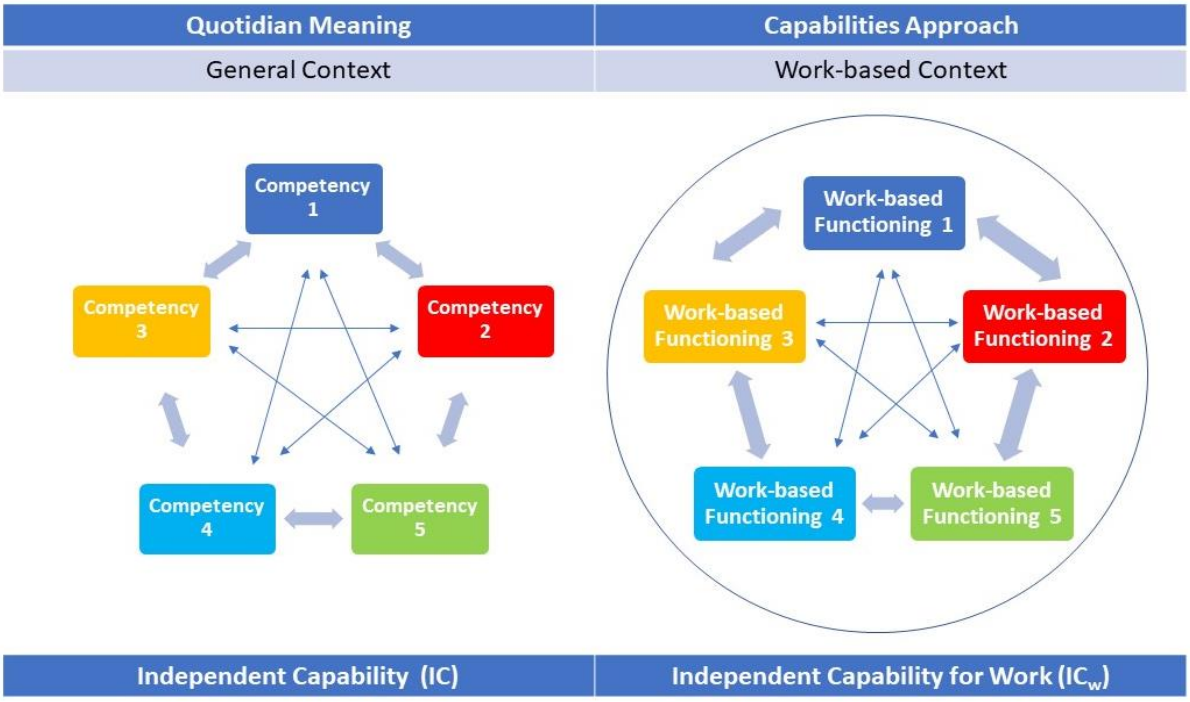

Figure 2. 1 Illustrating the situating of IC within the Capabilities Approach

As discussed earlier, external factors such as the environmental and social conversion factors given by Robeyns (2005) will impact the available capability spaces of individuals. This then will affect the ability on individuals to enact functionings. While Sen and Nussbaum have focused on the creation, freeing and accessing of capability spaces to help promote the enacting of valued functionings – a Top-Down approach if you will – this study takes the approach that through the development of individual's IC_w they are more effective at realizing their valued functionings within the working environment. This Bottom-Up approach looks to meet the approaches from the front runners of CA somewhere in the middle to help achieve the goals of freedom, agency and social justice.

This prompts the research question that the study poses, namely, what are the work-based functionings that constitute IC_w as a concept in the South African PHE context? The aim of this study is to provide insight into which work-based functionings are valued by higher education institutions whose purpose is to develop quality, highly capable graduates for the South African economy, the professionals that work there and the students that invest their time and money into the institutions. The study then intends to develop a means of assessing engagement with IC_w functionings within educational practices that could help identify methods of improving IC_w development in students, or, at the very least, provide a snapshot of current IC_w engagement in the educational context. The key aspect here is the "measurability" of the engagement with IC_w

functionings as this allows for a quantification or comparison of IC levels within the educational context. The concepts of Emotional Intelligence (EI) and Intelligence Quotient (IQ) provide some guidance in this instance as, like IC_w, they are both concepts that look to explain and assess internal, intangible aspects of people within real world contexts. The next section will consider how IC_w links and differentiates itself from these core concepts and explore the core similarities.

2.4 Situating IC with regards to IQ and EI

In developing the concept of IC_w, it is important to consider other, similar spheres of focus. Terms such as *cognitive processes*, *competencies*, and even *capabilities* are used to describe concepts such as EI and IQ. It is the contention of this study that IC_w is comprised of competencies that lend themselves to three different aspects: Emotions, Cognitive Processing and Personal/Professional Traits (see figure 2.2, p. 41). While the first two aspects form the basis for the general concept of IC, it is the third aspect that provides the contextualisation, in this case, for IC_w being in the working context. It is important to note that these three aspects constitute a starting point for discussion around IC_w and the conceptual development of IC_w but that it is anticipated that the empirical research undertaken in this study will extend and contribute to the development of this concept. In this section, the rationale behind the claim that IC_w requires consideration of these three aspects will be discussed. It will also highlight the dividing lines between the three aspects and justify the selection and integration of concepts and ideas.

The concept of intelligence and the nature of cognition has been developed and debated for many years and so too, more specific to this study, has the concept of measuring intelligence. The concept of intelligence moved from a singular concept in the early 1900's to discussions of multiple components that comprise an individual's intelligence. Gardner (1983) proposed that intelligence had nine components that comprised a person's overall intelligence, using categories such as linguistic, natural and existential intelligence. One such evolution of the componential approach to intelligence was given by Sternberg in 1980 and 1984 (2005) when he proposed the Triarchic theory of human intelligence. This theory proposed that:

> *"…intelligence could be understood in terms of a set of elementary information processing components that contribute to people's intelligence and individual differences in it."* (Sternberg, 2005, p. 189)

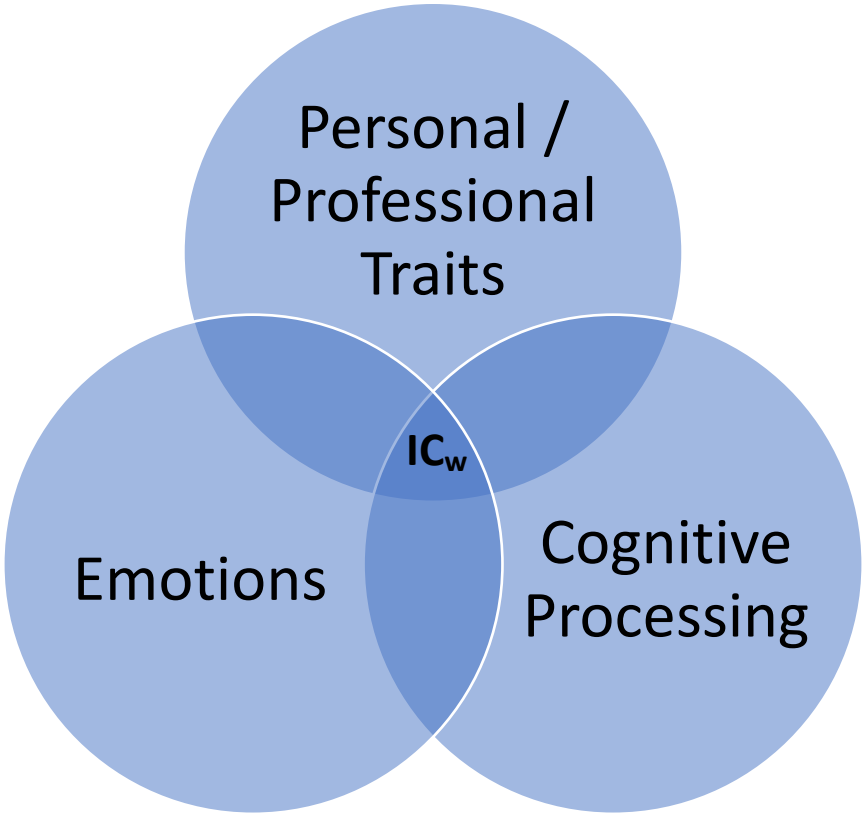

Figure 2. 2 Situating IC within the three aspects

These components were proposed by Sternberg (2005) as a common set of universal processes that underlie an individual's intelligence. The first was termed *Metacomponents* and this referred to the executive processes that plan what to do, focus on what is being done and analyses what has been done. The second was termed *Performance* components which execute the instructions of the metacomponents. These include the perceiving, comparing and judgement of stimuli and relationships between stimuli that guide actions. Lastly there are the *Knowledge-acquisition* components which are used in the gathering of new information and concepts. Sternberg argued that these three components and how they integrated formed a person's intelligence. He also added that there were three aspects in which the combination of these processes differed and were required to be distinct in order to demonstrate high intelligence levels. These aspects were the analytical aspect, the creative aspect and the practical aspect. Performance in each of these aspects required a different utilization of the three components and thus higher levels of intelligence could be demonstrated in one aspect while lower levels demonstrated in the others. The integration of all the components successfully across the three aspects Sternberg calls *Successful Intelligence* which he uses as his definition of intelligence.

> *"Successful intelligence is: 1) the ability to achieve one's goals in life, given one's sociocultural context; 2) by capitalizing on strengths and correcting or compensating for weaknesses; 3) in order to adapt to, shape, and select environments; and, 4) through a combination of analytical, creative, and practical abilities."* (Sternberg, 2005, p. 189)

Sternberg (2005) set out how he developed methods by which he assessed successful intelligence by breaking down each aspect into sub-components that were more inclined to measurement. Here is where we can draw similarities with the concept of IC_w. IC_w is similar to successful intelligence in that it involves the integration of intellectual components to solve unfamiliar problems. Furthermore, the sub-components utilized by Sternberg can be similar to the functionings that comprise IC_w. IC_w does involve all aspects in this definition however the differences come in point 4 (*through a combination of analytical, creative and practical abilities*) and the additional focus on the emotional aspect.

Where IC deviates from successful intelligence is the focus on the creative aspect. While successful intelligence comprises all 4 of the aspects given above to form a comprehensive understanding of how intelligence works within individuals, IC_w focuses primarily on the creative aspect. The creative aspect essentially formulates the area of unfamiliar problems and contexts with which IC_w is concerned. I argue here that IC_w is not an *intelligence* per se, but rather an ability or management of internal resources to generate positive and innovative outcomes in situations in the working environment. The justification for this argument is that by focusing on one sub-component of Intelligence, IC_w is actually based at a behavioural level rather than a cognitive one. Another deviation from successful intelligence is the incorporation of the emotional element which drives aspects such as self-confidence, working with others and developing positive relationships. These components are more in line with the concept of Emotional Intelligence (EI)

With Gardner's theory that there was not one, general mental ability ("*g"* intelligence) but instead nine different types of intelligence came the evolution into what Sternberg (1980) called *social intelligence* (prior to his successful intelligence theory) which placed the two categories of intelligence from Gardner – interpersonal and intrapersonal intelligence – into one category that focused on an individual's intelligence within a social setting. Another theory that evolved from Gardner's was the theory of Emotional Intelligence (EI) which also grouped the interpersonal and intrapersonal intelligence categories into a more comprehensive concept. Emotional Intelligence is defined as:

> *"… a form of social intelligence that involves the ability to monitor one's own and others' feelings and emotions, to discriminate among them, and to use this information to guide one's thinking and action."* (Salovey & Mayer in Cherniss, 2000, p. 4)

This definition indicates that EI differs from *g* intelligence as it is merely an ability to manage emotions rather than a cognitive process. This has led to many contrasting and conflicting views as to whether EI can be viewed as an "intelligence" at all (Cherniss, 2010; Murphy, 2014; Pfeiffer, 2001). There are disagreements between scholars about whether or not emotional intelligence is actually an intelligence and is not merely a process of emotional management, but Boyatzis & Sala (2004), gave a very persuasive argument to propose that EI is, in fact, an intelligence by defining the parameters that any conception of intelligence needs to adhere to, namely:

1. *"Related to neural-endocrine functioning;*
2. *Differentiated as to the type of neural circuitry and endocrine system involved;*
3. *Related to life and job outcomes;*
4. *Sufficiently different from other personality constructs that the concept adds value to understanding the human personality and behaviour."* (Boyatzis & Sala, 2004, p. 3)

Boyatzis and Sala (2004) argue that EI does in fact align with these criteria and so constitutes a conceptualization of intelligence. The main detractors of EI as an intelligence (Conte, 2005; Locke, 2005) argue that EI doesn't take into consideration the primary cognitive processes and thus is problematic on the *differentiated as to the type of neural circuitry and endocrine system involved* point. It is also problematic on the *related to life and job outcomes* point in that it is not as good a predictor of success in relation to job and careers as that of the IQ measures of *g* in the variety of general mental ability tests (GMAT)

> *"… g can be thought of as the underlying common factor to all types of cognitive processing (i.e., verbal, mathematical, spatial, logical, musical, and emotional)."* (Boyatzis, Bastia-Foguet, Fernandez-i-Marin, & Truninger, 2015, p. 43)

Cherniss (2000) challenges the latter of the two problems by arguing that while having a required *g* level is necessary for cognitive ability, the ability to work, analyse and engage successfully with peers has less to do with IQ and more to do with EI and thus has a strong correlation to job success predictability. Boyatzis, *et. al.* (2015) support this by referring to the findings of Boyatzis and Goleman (2007) which show that the behavioural, competence-based perspective of EI can

predict job performance above and beyond that of the GMATs for *g*. These findings supported the idea that:

> *"…emotional intelligence competency is an ability to recognize, understand, and use emotional information about oneself or others that leads to or causes effective or superior performance."* (Boyatzis & Sala, 2004, p. 5)

The other criticism of EI which argues that it doesn't take primary cognitive processes into consideration is a little harder to argue with. The main counter-point is that while EI does not focus on cognitive processes it still meets criterion 2 (*Differentiated as to the type of neural circuitry and endocrine system involved)* of an intelligence theory as EI can actually predict neuro-endocrine patterns within different individuals (Boyatzis & Sala, 2004). While this may satisfy the intelligence debate (albeit debatably) the separation of EI from cognitive processes is well supported. Boyatzis et al. (2015) discuss multiple studies that show a weak or non-significant correlation between EI competencies and measures and those of *g* intelligence theories and tests. They went further to find that cognitive competencies are more closely linked with *g* than with EI thus emphasizing the difference between EI and more traditional conceptualizations of intelligence.

It is clear that similarities and difference between EI and Successful intelligence can be noted but it is important to consider the relationship to the concept of IC_w. IC_w and the functionings that comprise it speak to and relate to cognitive processes i.e. how individuals solve new problems in new contexts. Yet it also needs to have emotional elements as it requires a surety and self-confidence because real world problems may have quite unintended, unwanted or even no solutions, which requires the individual to assess, judge and alter self-performance from a self-perspective. Thus, IC_w is comprised of elements of both cognitive and emotional aspects. These characteristics are discussed in multiple articles, conferences, and studies within the CA sphere. Maria Hoffman (2006) discussed "inner capacities" as being made up of four pillars of learning that relate to life skills education: Learning to know, Learning to be, Learning to live together, and Learning to do. Stephenson (2012) mentions the importance that self-confidence plays in the generation of IC. But which of the elements and functionings are more valued or required within a South African private higher educational context? Which of the multiple functionings should be combined to develop the concept of IC_w within the South African context?

According to Boyatzis et al. (2015) those best suited to make such judgements are those within the professional sphere. Boyatzis et al. (2015) found that at a behavioural level, the closest

correlations with *g* competencies were found within the professional sector. This implies that when gaging an individual's ability to perform certain competencies, the people within the individual's professional environment were comparatively accurate in their assessments. Due to the nature of the professional environment and the amount of time spent working in it, colleagues, managers and subordinates could best assess both EI and IQ competencies of individuals – more so than even a self-assessment. This suggests that when exploring which competencies of IQ and EI also constitute IC_w, there needs to be input from the professional environment which develops professionals for the South African workplace. In other words, professionals who focus on the generation of such competencies/functionings within the students, namely, tertiary level / higher educational lecturers, curriculum developers and academic directors. It is their responsibility to understand the requirements and desired competencies of the working environment and then – and this is the key distinction from employers – develop and nurture them within the students themselves. As discussed in Chapter 1, there have been a large volume of research into what competencies employers look for, but this has not translated effectively enough into the education system to address the issues of confidence and desired competencies within graduates. By engaging the people whose very job it is to prepare graduates for the various industries, the bridge between employer and graduate if you will, the chances of more effective educational integration of IC_w functionings improves. Moreover, CA contends that the capabilities that exist require individuals to choose and enact the functionings they value and desire. This individual choice is the reason for the inclusion of the students as they focus on the development and enacting of the work-based functionings in the development of their own careers. This study will look to ascertain which of the work-based functionings are most valued in the private higher education arena and use this as the basis for composing a more cemented conceptualization of IC_w.

2.5 CA and the South African Education Context

At this point I have discussed IC_w's position and relation with CA as a conceptual framework, as well as argued for IC_w to have elements from the three aspects of successful intelligence, emotional intelligence, and the work-based functionings that are valued by the higher education professionals and students (personal/professional traits). The next step is to provide insight on the context in which the development of IC_w will occur, which is the context of South African, private higher education.

South African education is currently organised into three sub-frameworks (*National Qualifications Framework Act 67 of 2008*, 2009). The first is the General and Further Education and Training section which takes learners from around the age of 5 or 6 through various phases, culminating in the National Senior Certificate qualification, colloquially called Matric (grade 12), around the age of 18. Upon the successful completion of the National Senior Certificate learners are able to continue their education in the Higher Education section which covers higher education qualifications ranging from higher certificates, through degrees, to doctoral qualifications. The third sub-framework is the Trades and Occupations section that runs in parallel with both the General and Further education, and Higher education sections. While the first two section focus on more academic pathways of development, the Trades and Occupation section focuses more on practical and professional skills development pathway. Since the government gazetting of the National Qualifications Framework Act 67 of 2008 (2009), the South African educational system is organised as a series of 10 levels of qualification starting at the end of General Education phase (grade 9, 15 years of age): NQF level 1. The National Senior Certificate and National Senior Certificate Vocational (the trades and occupations equivalent) are NQF level 4, a degree at level 7, with a doctorate qualification at the top: NQF level 10. As explained in the act:

> *"(1) The objectives of the NQF are to—*
>
> *(a) create a single integrated national framework for learning achievements;*
>
> *(b) facilitate access to, and mobility and progression within, education, training and career paths;*
>
> *(c) enhance the quality of education and training;*
>
> *(d) accelerate the redress of past unfair discrimination in education, training and employment opportunities."*
>
> (*National Qualifications Framework Act 67 of 2008*, 2009, p. 6)

As stated in Chapter 1, the South African education system is facing a number of issues across the board. While dealing with a poor performing economy and high unemployment levels, there are substantive problems in the capabilities that the system is producing. The National Development Plan 2030 is a high-level strategy from the South African government to improve South Africa in all major sectors of life, work and governance, including education. Of education, the concern is clear:

> *"The South African education system needs urgent action. Building national capabilities requires quality early childhood development, basic education, further and higher education."* (The National Planning Commission, 2011, p. 295)

Also, as discussed in the rationale in Chapter One, the National Development Plan also sets growth targets to accommodate more and more students at all levels to meet the demand. This required increase in capacity of higher education institutions is not possible without the presence of structured, quality private institutions. In South African education, while the public universities provide the majority of students higher education opportunities, PHEIs offer an often smaller and more specialised option for study. They still operate within the higher education sphere and are an important part of the South African education system.

> *"Private providers will continue to be important partners in the delivery of education and training at all levels. Ensuring the quality of private provision requires enabling regulation, quality assurance, and monitoring and evaluation of programmes."* (The National Planning Commission, 2011, p. 320)

It is this study's contention that the CA offers a different perspective of education that could provide very valuable insight into improving the South African system in line with the National Development Plan. As discussed previously, the development of both IC and DC within students allow for a greater ability to enact their valued functionings and better utilize their individual capability spaces. The ability of individuals to fully utilize their capability spaces is the foundational principle of the approach and CA has already made many contributions to evolving education both globally and locally. Some examples of how CA is being integrated into different levels of education follow:

Nussbaum (2006) discusses three capacities that are essential to democratic education: the capacity for critical examination of oneself, critical thinking in relation to different ethnicity, cultures, and religions, and the ability to identify as being part of the broader human community. Through examples of Indian rural and urban education, Nussbaum explains how these three capacities have been used as guiding principles for education and produced impressive learning even in the most impoverished and poorly resourced communities.

Vaughan and Walker (2012) discuss how education has a unique relationship with CA in that while CA promotes the individual's ability to achieve their valued functionings, education by its very nature, has the ability to change and alter those functionings within individuals. This can

obviously be problematic in the continuation of the societal status quo, whereby individuals are developed to value certain knowledge, certain jobs, and certain life choices. An example of which is the continuation of poverty in South Africa in the post-Apartheid era. Vaughan and Walker (2012) researched this idea within a variety South African tertiary education courses to explore…

> *"the extent to which these courses enabled university students to develop the skills and capacities to reduce poverty in their future working lives; to what extent the courses enabled them to become 'pro-poor professionals'."* (Vaughan & Walker, 2012, p. 504)

A "pro-poor professional" is a professional who values helping the community around them such as a pro-bono lawyer or engineers that work on ways to improve township infrastructure, rather than private, potentially more lucrative work. The study resulted in the development of a Public-good Professional Capabilities Index which measures the extent to which courses help develop public-good capabilities among students. The purpose here to identify ways to better encourage pro-poor capabilities within higher education students in South Africa as a way of progressively fighting poverty – a direct obstacle to achieving valued functionings.

Fongwa (2018) provided a summary of employment research in South Africa between 2004 and 2018 that indicated that the vast majority were skills-focused and quantitative in nature. In other words, key skills have been highlighted but the measure of success has been based on whether or not those graduates were then employed. The problem with this, as discussed by Fongwa (2018), is the vast amount of personal, social and environmental conversion factors that impact the numbers and measurements. Fongwa proposes a CA based framework that would be better equipped to measure quality of graduates in relation to their ability to enact their valued functionings within the work environment.

> "*Using the personal, social and environmental conversion factors, the CA can offer a nuanced re-examination of graduate outcomes research. Besides promoting social justice and equality of opportunity and outcomes, the CA can be applied as a framework within which the university experience—including graduateness, skills, competences and human development attributes—can be conceptualised and evaluated more broadly in achieving valued wellbeing."* (Fongwa, 2018, p. 17)

There has also been a movement try and take CA from a more macro-level to a more concrete, day-to-day level in education. As mentioned previously, Walker & Nguyen (2015) put forward an argument for the development of more capabilities-friendly assessment to help nurture and

develop life-long learning principles within students. Using studies from the United Kingdom, Walker and Nguyen (2015) argued that education, specifically higher education, has a fundamental responsibility to develop the valued functionings of its students, and that it is through an updating of education assessment policy, structure and style that this can actually start to be implemented.

> *"Therefore, we propose that fostering valuable capabilities and functionings should be one of the main goals of universities, and assessment needs to be a space of operationalisation, supporting students in such a formation process."* (Walker & Nguyen, 2015, p.246)

As can be seen, CA has already started to enter into the educational thinking and practice globally, here in South Africa, and specifically in higher education. The goal of this study is to contribute to this growing cannon of knowledge, perspectives and practices through the development of IC_w within a South African private higher education context. As Fongwa (2018) points out, there are a number of competency/skills focused models that look to focus education towards developing more employable graduates in other countries. The Australian Department of Education, Science and Training propose 8 core skills that improve employability: communication, teamwork, problem-solving, self-management, planning and organisation, technology, lifelong learning and entrepreneurial skills. Wagner (2014, as cited in Fongwa, 2018) proposed 7 competencies that graduates needed to have: critical thinking, collaboration, agility and adaptability, initiation and entrepreneurship, analysing information, communication and curiosity and imagination.

In South Africa, while desired work competencies have been identified in a number of studies, there has been little, effective integration into educational practice. This is the gap that IC_w looks to address in the South African PHE context. IC_w is a functioning that integrates work-based functionings to achieve in the capability of work. Through the identification of the key work-based functionings within the PHE context, IC_w can add to the movement towards a more CA perspective of South African higher education. Not only contribute to the academic discourse, but to actually help provide a pathway to implementation of IC_w engaging practices. Specifically in the development of assessment tools to help reveal and refine IC_w engaging practices within pedagogy.

2.5 Developing Assessment Tools

The previous section has attempted to clarify a current definition and conceptualisation of IC_w for this study and place it within the South African context. This section attempts to consider a means of assessing IC_w within education. This study will look to develop a means of assessing IC through a number of processes that focus specifically on PHE students based in South Africa. The intention is focused on development of evaluation tools and as such, the piloting and testing of these tools would be catered for in future research and studies. This section will set out the space and boundaries which will contextualize the development of the tools.

2.5.1 Assessment in context

Basil Bernstein (1971) described assessment – along with curriculum and pedagogy – as one of the three message systems of education, and it is through the interaction between these message systems that educational practice can be categorized, analysed and developed. Shepard (2000a) explains the development of the interaction between the three domains from a historical context to what she termed as an emergent one, focussing on the changes in thinking about assessment that have happened and are happening currently. Shepard (2000a) explains how assessment has developed and evolved in tandem with concepts of intelligence, cognitive ability and learning theory. Hereditarian theories of intelligence such as IQ, combined with a social efficiency curriculum meant that the focus of assessment was a measure of an individual's inherited characteristics. With the shift in dominant learning theory towards behaviourism, assessment evolved to become the testing of the accumulation of small *bits* of knowledge presented in a highly structured and sequenced situation. This type of assessment was then indicative of the individual's ability to demonstrate the prerequisite behaviour within a given context.

More recently assessment has evolved with the development of constructivism:

> *"Fixed, largely hereditarian theories of intelligence have been replaced with a new understanding that cognitive abilities are "developed" through social supported interactions."* (Shepard, 2000a, p. 7)

Premised on the constructivist learning theory and the Zone of Proximal Development (ZPD) given by Vygotsky (1978), assessment has become more focused on the testing the ability of the learner to demonstrate cognitive functions such as critical reasoning, solving complex problems and real-world application, which will be further explored later in this chapter. By setting up

curriculum, pedagogical practices and assessments that cater to the development of these cognitive functions and work with each other to support these interactions, learners are better able to develop current – and construct new – cognitive abilities. What this meant for assessment was a change of perspective, however, Shepard argued that while there was development and progress being seen and pushed in both curriculum and pedagogy, assessment was being left behind. For Shepard, assessment needed to stop being a test for the memorization of knowledge and skills that summarized the educational course or module but should rather be used more regularly during lessons and interactions to provide more regular feedback to aid students' progression through the ZPD. And so, while the other two message systems progressed towards a more formative approach, assessment remained largely a summative exercise.

Scriven (in Shepard, 2000b) provided a distinction between formative and summative processes albeit in business terms. Formative is an internal process used with the purpose of improving *a "program or product"* while summative is an external process used to summate and evaluate data about the program or product. In terms of assessment, formative then is internal assessment that is focused on the development of concepts within the learner through regularity of feedback, while summative assessment is externally based that looks at the development of a learner over a period of time. Shepard (2000b) argues that while summative assessment which has historically been the focus of education is a, "natural part of learning" and still has a valuable role to play in education, formative assessment is required more in day-to-day engagement in education in order for students to better develop through the ZPD. Shepard (2000b) highlights that the problem with using assessment in a purely summative approach is that educators tend to move away from generating socially supported interactions that lead to cognitive development and rather focus on preparing students for the summative test.

> *"… in recent decades … teachers in the contexts of high-stakes accountability testing have reshaped instructional activities to conform to both the content and format of external standardized tests, thereby lowering the complexity and demands of the curriculum and at the same time reducing the credibility of test scores."* (Shepard, 2000b, p. 3)

By taking a more formative approach to assessment, student learning and cognitive development are made the priority. Through regular assessment, albeit with lesser valued or smaller tests or activities, regular feedback can be discussed to allow for both learner and educator to more closely monitor and adjust development. While Shepard's emergent view has become the current view in South African education, there is still a strong emphasis on summative assessment which

highlights the continued lag in formative assessment uptake and implementation and perhaps yet another factor in the lower quality graduates entering the workforce.

However, there is an argument to be made about the continued need for summative assessment. By its very definition, summative assessment gives a snapshot of a person's capability at a given point in their education and development. It gives the assessor a clear understanding of the current state of development of a person, class or society. By itself, the information from a summative assessment can be useful, however by using that data to inform future development, the summative assessment can have added value. This point is discussed by Black (2003) when he discusses how summative assessment can be used formatively if results and findings from summative tests are used for both reflection on performance and guidance for future improvements.

It is this approach to assessment that this study will embrace. In order to assess a concept, you need first need to have a clear idea of the concept and its characteristics that you assessing. The first part of this study looks to develop and clarify the concept of IC_w through the identification of comprising aspects. Once a clear concept is identified, an assessment tool needs to be developed to provide insight into the current situation surrounding the concept. For this study, a snapshot of the current IC_w engagement practices is absolutely key as the concept of IC_w has not been assessed before. Thus, a summative perspective could provide information on the current IC engagement practices within an educational context. However, following the arguments of Black (2003) it is also vital that the information and findings from this study are used to aid future development. The very purpose of assessing IC_w is to give learners, educators and administrators the feedback they require in order to make such decisions about their own development and those of others. An assessment tool for IC would definitely require aspects of both formative and summative perspectives.

At this point, it is important to note that while IC_w as a concept has an individual development quality to it, information on current IC_w engagement can aid the development and progression of curriculum, pedagogy and assessment in education. Walker & Nguyen (2015) discuss this in their paper that looks at the value of "capabilities-friendly" assessment.

> "…*if we wish to develop our students as critical, collaborative and autonomous learners as envisaged by higher education (HE) policy, this needs to be fostered through*

> *assessment as much as through curriculum and pedagogical approaches. An integrated approach to student learning is especially urgent in the light of poor undergraduate completion rates (CHE 2013) which are both wasteful of scarce HE resources, are inadequate for economic development, but also devastating for students (mostly from low socio-economic backgrounds), their families and their futures."* (Walker & Nguyen, 2015, p. 244)

An integrated approach to learning requires the interaction of the three message systems of education – all speaking and responding to each other to support the development of the learner. This study will focus on the development of assessment tools with this integration at the forefront of its design.

2.5.2 Theories that guide the development of an assessment tool

While Chapter 3 will discuss the process of how an assessment tool for IC_w will be developed in more detail, it is important to clarify the key principles that will guide the process. I have already discussed a key principle in that the assessment will be developed with feedback and integration with the other domains of education. There are other key principles that this study will adhere to during the assessment design process that will ultimately shape the final assessment tool. These principles will not only guide decision making during the research and design processes but also provide boundaries and limitations to help focus our efforts and describe our results. What follows is a discussion of these key guiding principles.

1. Constructivist Learning Theory

In the establishment of an assessment tool, it is important to recognize the learning theory from which the tool is derived. Zane (2009) discussed how "measurement professionals" are guided not only by policy or regulations, but also in their fundamental belief about the nature of education.

> *"Learning theory has much to offer to guide construction of high-quality learning and testing products (Ertmer & Newby, 1993). Careful examination of learning theory can yield linkages that ground design principles, provide reasoning for day-to-day design decisions, and can even offer assumptions useful for testing the viability of programs and products."* (Zane, 2009, p. 81)

Constructivist learning theory is a theory that gained popularity in the 70's and 80's in response to the limitations and flaws of behaviourist learning theory. Its key point is the understanding of

individuals being constructors of knowledge through analysis review and integration of previously learned concepts. Vygotsky (1978) originated this learning theory when he developed the concept of the Zone of Proximal Development (ZPD) that explained how learners learn through the integration of everyday concepts and the more abstract scientific concepts. In essence, the learner would be able to utilize the already understood, concrete concepts as a guide and basis in order to learn and understand more complex, abstract concepts. IC_w and the functionings which comprise it are concepts that have grown out of constructivist theorizing, in that IC_w and its functionings focus on how a person uses pre-existing knowledge, current cognitive abilities and experience in order to construct solutions to new, unfamiliar problems. Thus, constructivism is fundamental to the concept of IC_w and any assessment used to measure it.

Zane (2009) highlights another key link between assessment and constructivism that also links with IC_w and it's cognitive functionings:

> *"A review of constructivist learning and related thinking theory suggests that some underlying principles could be extracted to support performance assessment design decisions and guide development methods. For example, using constructivist theory as a foundation for assessment design suggests a greater emphasis on cognitive processing (versus content topics or visible behaviours) as assessments are designed. This greater emphasis on cognitive processing could then lead to the specification of more robust performance measures and the creation of scoring rubrics that focus more on enduring traits than on content knowledge."* (Zane, 2009, p. 82)

By utilizing a constructivist learning theory as the basis for this study, the assessment being designed will have better insight into the cognitive aspects of the student actions which informs the behaviour and actions that IC_w describes.

2. Social Cognitive Theory

Constructivism emphasizes the importance outside influence has on the development of the learner's ZPD by stating that learners would learn more efficiently and effectively with the help of more knowledgeable people, e.g. teachers. Through a process called *scaffolding,* a teacher would be able to aid the learner move from previously learned concepts to understanding newer or more complex concepts, thus improving the learning and development of the learner. Bandura looked to take this further by developing Social Cognitive theory which provides a model of both how people learn and how they utilize factors to decide on actions and behaviour (Pajares, 2002).

Social cognitive theory views human functioning as a "…dynamic interplay of personal, behavioural, and environmental influences." (Pajares, 2002) Essentially how a person reflects on their own behaviours will inform and alter their environment and personal characteristics which in turn will affect future behavioural decisions. The interaction between the three factors – personal, behavioural and environmental - is what Bandura called the *triadic reciprocality.*

Social Cognitive theory provides clarity on the link between cognitive functioning and actions taken by individuals. This forms the basis of the assessment whereby observed behaviour and actions when solving problems can be directly linked to the functionings that constitute IC_w. The key concept from social cognitive theory is that by controlling and manipulating the environmental factors to emphasize the desired functionings of IC_w, the cognitive aspects of the individual can be better analysed during the assessment. It is recognized that the personal factors of the triadic reciprocality include more than just cognitive processes such as biological events or characteristic and this will guide the development of the assessment to try to isolate more IC_w functionings.

3. Self-Efficacy

One of the key concepts of social cognitive theory is that of self-efficacy. According to Bandura, self-referent thought (thinking about one's thinking) mediates between the knowledge and actions of an individual (Pajares, 1996) and as discussed above, through self-reflection an individual then modifies future behaviour and actions.

> *"Through self-reflection, people make sense of their experiences, explore their own cognitions and self-beliefs, engage in self-evaluation, and alter their thinking and behaviour accordingly."* (Pajares, 2002)

For Bandura, self-efficacy is the "belief in one's capabilities to organise and execute the courses of action required manage prospective situations." (Pajares, 1996, p. 544). As discussed previously, IC exists at a behavioural level. It looks at the management of internal resources in order to solve unfamiliar problems within unfamiliar contexts. Self-efficacy is the key link between cognitive functionings and behavioural actions. Bandura (2006) emphasizes the strength of self-efficacy in determining behaviour:

> *"Behaviour is better predicted by people's beliefs in their capabilities to do whatever is needed to succeed than by their beliefs in only one aspect of self-efficacy relevant to the domain."* (Bandura, 2006, p. 310)

Bandura discusses how a person's belief in their capability to complete a task in a specific task or situation is a less-accurate predictor of behaviour than the person's belief in their general ability to complete tasks successfully. This is particularly relevant to IC_w as when confronted with an unfamiliar problem, the individual by very definition would have a low perceived self-efficacy for the particular task. In the assessment of IC_w engagement, observing how individuals negotiate the path between low self-efficacy in a new situation and high self-efficacy using the existing internal resources (IC_w functionings) will be key. Also, the emotional aspects of IC_w, such as self-confidence and self-esteem are closely linked and affected by self-efficacy, which would allow for a more accurate assessment.

4. Contextualization

The last main principle of design for the assessment is that of contextualization. As discussed previously, IC_w is comprised from a combination of elements from three main aspects: Emotional, cognitive processing and personal/professional traits. This final aspect is very specific in context, in that it represents those traits / functionings that are desired and demanded by both the specific industry and the PHEIs that feed the specific industry. This input is vital to the assessment process as the professional traits that constitute IC_w will be generated from the stakeholders in private tertiary education institutions in Johannesburg, South Africa, and will be the starting point for decisions on which work-based functionings should be focused on in the exploration of IC.

It is important to remember that in this study's construction of the concept of IC_w, while there are some universal aspects, there is a component that is contextual. While this may appear, at least at first, to be problematic, it is actually one of the key strengths of IC. IC_w is the ability to solve unfamiliar problems in unfamiliar contexts in the capability of work, and so, when assessing IC_w, there needs to be a definition of this context. Again, this will help shape the assessment methodology by setting up boundaries and limitations, but also providing direction and key focus.

In summary, the key principles that guide the design and development of the assessment tools are as follow:

1. Constructivist learning theory – assessment design needs to acknowledge that knowledge and engagement of IC_w functionings will be constructive in nature.
2. Social Cognitive Theory – assessments of IC_w engagement will be influenced by the social context of the educational environment.

3. Self-Efficacy – assessments will need to recognise IC_w engagement with educators and students would need to assume some level of self-confidence in general educational ability.
4. Contextualisation – the assessment will need to indicate and adapt to the context in which it is being assessed. A more flexible or adaptive assessment tool would be beneficial in this sense.

2.5.3 Assessment design

As discussed, testing for IC_w will incorporate aspects from Emotional Intelligence, Successful intelligence and the desired, work-based personal/professional traits in South Africa. While any assessment tool for IC_w cannot be declared and defined without detailed research to support it, here I will discuss the outline of the steps to be taken during the design process:

1. Determine key work-based functionings or cluster of work based functionings of IC_w
2. Analyse current assessments that assess key the determined key competencies and/or clusters
3. Investigate conceptual frameworks that can help structure an assessment tool
4. Construct a method by which IC_w engagement in education can be assessed.

This review of literature has highlighted and discussed some of the key functionings and their natures, however far more research and data gathering is required in order to clarify these functionings. This will be discussed in more detail in Chapter 3, but it is important to note that it will be the PHEIs and the professionals of the PHEIs that will identify the functionings that comprise IC_w as they are the professionals whose very career is based on preparing students to face the trials and tribulations of their chosen industry. It will then be a combination of professionals and students that will then evaluate those identified competencies in relation to the students' IC_w development.

Drawing from the research of Boyatzis (2011), the functionings will be identified and categorized into one of the three aspects of IC_w. Once this has happened clear definitions and relevant educational behaviours, actions and responses will be composed together to indicate an engagement with that functioning. Understanding the concept of engagement and being able to identify various levels of engagement are keys aspects of the assessment tool design and these will be discussed in more detail in Chapter 5. Boyatzis (2011) goes further to discuss how the individual competencies can be used in combination – what he terms a *Cluster of Competencies*. By identifying the cluster of competencies, a far more accurate and efficient assessment tool can

be achieved. During this entire process the ideals of the *American Psychological Association's Guide to Educational and Psychological Testing (2014)* will be used to guide and set the standards for each such assessment. This book is the international guide to aid assessment tool development by providing key aspects to consider when developing an assessment tool in education. Two relevant examples are standard 3.9 and 4.0

> *Standard 3.9: Test developers and/or test users are responsible for developing and providing test accommodations when appropriate and feasible, to remove construct-irrelevant barriers that otherwise would interfere with examinees' ability to demonstrate their standing on the target constructs* (American Psychological Association, 2014)
>
> *Standard 4.0: Tests and testing programs should be designed and developed in a way that supports the validity of interpretations of the test scores for their intended uses. Test developers and publishers should document steps taken during the design and development process to provide evidence of fairness, reliability, and validity for intended uses for individuals in the intended examinee population.* (American Psychological Association, 2014)

Standard 3.9 refers to fairness of testing and requires assessment tool developers to keep universal assessment at the forefront of their design. By minimizing any barriers to students providing truthful and accurate answers – such as language, subject specific terminology and symbols – the results of such assessment gain credibility. The exact same idea behind Standard 4.0 in that by documenting each step of the assessment design with regards to fairness, reliability and validity, the overall fairness, reliability and validity of the assessment tool is increased.

Through the following of the standards given by the American Psychological Association's Guide to Educational and Psychological Testing (2014), the assessment tool to assess IC_w engagement will gain more accurate and credible results.

2.6 Conclusion

This review of literature has set out the concept of IC_w as well as the stance and direction of this study. It has discussed the paradigm of the Capabilities Approach and its importance to education, thus making it a suitable framework for the exploration and development of the concept of IC_w.

The Capabilities Approach discusses a wide variety of topics such as social justice and looks to change how high-level policies and decisions affect the capability spaces of people within societies. This study looks to develop the concept of IC_w as well as a method of assessing its levels of engagement in education, and through this development and assessment, individuals will have better knowledge and ability to fully realize and enjoy their valued functionings within the capability of work. While dependent capability has been discussed to be well nurtured in the current South African educational system, IC has been identified as the neglected piece of the educational puzzle that is resulting in poorer quality graduating students.

This review has also unpacked the concept of IC_w and situated it with respect to both successful intelligence and emotional intelligence. IC_w is the management of those internal resources and work-based functionings that allow for the creation and generation of successful coping and problem-solving behaviours within unfamiliar contexts of work, and while this study aims to identify such resources and functionings that are core to IC_w, it is understood that these competencies, or cluster of competencies, will have an emotional component (EI), a cognitive component (SI) and a behavioural component (Personal / Professional traits).

I have also discussed the process of designing an assessment in order to measure the current IC_w engagement levels in education and the principles and guideline that will be followed in its creation. Chapter 3 will discuss and describe this process in more depth and present the research design and methodology selected for this study.

Chapter Three – Research Methodology and Design

3.1 Introduction

The purpose of this study is to discover and clarify which functionings should constitute IC_w in a South African private higher educational context, and then, once the concept of IC_w is clearly defined, to develop assessment tools which help analyse the level or quality of IC_w engagement within educational contexts. In order to do this first part as comprehensively as possible, a variety of perspectives, opinions and regulatory wants and needs need to be collected, analysed and combined to identify the functionings of IC_w. The nature of the research is predominantly qualitative as the participants shape the concept of IC_w with their thoughts and opinions. There is also a quantitative aspect to the research that happens with the valuation and quantification IC_w functionings that begin in early data collection but become stronger when formulating valid assessment protocols. Thus, the proposed research design for this study is a mixed-methods design with corresponding and supporting methodologies. This chapter discusses the research paradigm underpinning the research design selected for the study that finds expression in the research methodology. This chapter will also explain the concepts of qualitative and quantitative methodologies, mixed methods research design and key methodologies and processes that will guide and support the study.

3.2 Research Paradigm

According to Sobh & Perry (2006) one the key issues that researchers need to acknowledge and address is the paradigm utilised when conducting the research. Egon Guba (in Denzin & Lincoln, 2011, p. 13) referred to a paradigm as:

> *"The net that contains a researcher's epistemological, ontological and methodological premises… or interpretive framework, a basic set of beliefs that guides action."*

Ontology refers to the nature of reality, while epistemology refers to the relationship between that reality and the researcher (Denzin & Lincoln, 2011). The methodology is then the way in which we gain the knowledge of the reality. While the methodology will be discussed in more detail

throughout this chapter, this section with discuss the epistemological and ontological aspects of the paradigm. The main paradigms that guide this study are interpretivism, positivism and constructivism.

Interpretivism is a paradigm that believes that reality is a product of people's subjective experience of the world. Interpretivism relates to the constructivist epistemology in that it argues that individuals do not have access to the real world and so their knowledge of the perceived world is meaningful in its own terms. This can then be understood through careful use of interpretivist methods of research. According to Willis (1995) it is impossible for a person to take a completely objective view of reality and as such places value on the understanding of individual perspectives of external phenomena. For Willis (1995) interpretivists believe that there is no one right or correct way path to knowledge, and so interpretivist research needs to take into consideration the subjective views of both the participants and the researcher. In this way, qualitative methods align strongly with interpretivist principles. The purpose of this study is to develop the general concept in IC towards a more concrete, detailed, and contextualised concept IC_w within the framework of CA. This exploration of a concept can only be done within an interpretivist paradigm as there is nothing as yet to measure or experience. The development of IC_w as a concept requires the valuation of competencies from all 3 of its aspect, namely, emotional, cognitive, and personal/professional traits. This valuation comes from the professional educator and student participants and their subjective perspective on what they value. Thus, this study utilises interpretive, qualitative methods in order to discover the aggregated reality. Combining this with the perspectives provided in the relevant literature provides the study with a perspective of the reality of IC_w that is valid and truthful.

While interpretivism is a major influence of the research, there is also the use of positivism. Positivism assumes that reality, and what is real, can be measured through observation and integration. Knowledge is viewed to be objective, quantifiable and independent of social construction, and it has long been a focus of scientific research (Sobh & Perry, 2006). As a result, quantitative methods of collecting data are valued and these provide the means of objectively measuring empirical data. In the development of a concept such as IC_w, while an interpretivist perspective provides a clear method of identifying competencies through collective subjectivity, in order to provide an objective decision on the most valued and important competencies that constitute IC, a positivist paradigm is required. Thus, the study utilizes some quantitative methodology to support the findings of the qualitative data.

Historically qualitative and quantitative approaches to research have been separated; incompatible with one another. However, in recent times, there is a greater acceptance to utilising both approaches in research. The rise of Post-positivism as a research paradigm emphasises this. Post-positivism is a paradigm that looks to balance both interpretivism and positivist approaches (Panhwar, Ansari, and Shah, 2017). Post-positivism promotes the use of mixed-method approaches in research:

> *"Post-positivistic paradigm promotes the triangulation of qualitative and quantitative methods that explores the diversity of facts researchable through various kinds of investigations but respecting and valuing all findings as the essential components for the development of knowledge."* (Panhwar et al., 2017, p. 253-254)

This study embraces the post-positivist paradigm. In the debate between paradigms, this study aligns itself with an amalgamation of the two. In the development of an intangible concept towards a concrete, measurable construct requires both subjective and objective investigation. As a result, this study utilizes mixed methodology.

The third prevailing paradigm that impacts this study is that of Constructivism. Constructivism argues that the world is constructed by individuals perception of the world, and it is these constructions that explain human behaviour (Sobh & Perry, 2006). It is the contention of constructivism that a person's constructed reality is so powerful in meaning, that the object, positivistic reality is quite unimportant. This study uses this paradigm in the interviews with the PHEI representatives, in that by trying to understand their perspectives on the relevant topics, a strong sense of what is deemed to be important can be determined. As discussed in chapter 2, this study extends the constructivist paradigm with constructivist learning theory as a base paradigm for the development of assessment tools.

3.3 Qualitative research

Qualitative research is inquiry in which researchers collect data in face-to-face situations by interacting with specific people in their setting. This design technique analyses and describes individuals or people's social actions and behaviours (McMillan & Schumacher, 2010). Qualitative research takes the stance that individuals consciously construct their own understanding of the

world through experience and so qualitative research looks to extract and understand such experiences. Creswell (Creswell, 1994, p. 1-2) sees qualitative research as an:

> *"… inquiry process of understanding a social or human problem, based on building a complex, holistic picture, formed with words…"*

Creswell (2012) discusses how qualitative research is based around a *central phenomenon* which is a key idea, concept or process that is developed through the research and its techniques. Qualitative research is about "Exploring a problem and developing a detailed understanding of a central phenomenon*"* (Creswell, 2012, p. 16). As a result of this, qualitative research relies on the perspectives and views of the participants to provide the direction of the study. Burke, Johnson & Onwuegbuzie (2004) state that qualitative purists promote constructivist and interpretivist ideals in research, which reason that a time-free and context-free generalization are not possible or even desirable when studying phenomena, and that reality is socially constructed which means the experience of phenomena is essentially subjective.

This study focuses on the central phenomenon of IC_w and looks to develop it as a concept through the opinions and views of the various participants of the study. This aligns to the methods of Walker and Mclean (2013) in their development of the 8 public-good professional capabilities whereby data from higher education departments were analysed, coded and then extrapolated into the capabilities. The study used the qualitative methods of document analysis and semi-structured interviews in order to generate data, and then extrapolate the most valued functionings. The participants who provided their perspectives and insight are from private higher education institutions (PHEI's) which include managers, educators and students. It is from these perspectives that the valued functionings of IC_w are established in conjunction with insight from the literature surrounding both the cognitive and emotional aspects as discussed in chapter 2. This study also prescribes to a constructivist approach to learning which aligns strongly with qualitative inquiry. Thus, this study has a strong qualitative aspect.

3.4 Quantitative research

According to Burke, Johnson and Onwuegbuzie (2004) quantitative research promotes objectivity and emotional detachment which then led to time and context-free generalizations. Sale, Lohfeld, & Brazil (2002, p. 44) state that a quantitative approach is based on positivism which means that

empirical data can be “reduced to empirical indicators which represent the truth.” This stream of inquiry focusses on the description and explanation of trends by establishing, “an overall tendency of responses from individuals and to note how this tendency varies among people” (Creswell, 2012, p. 13). Creswell (2012, p. 13) goes on to discuss how two key characteristics of quantitative research are, “collecting numeric data from a large number of people using instruments with pre-set questions and responses” and “Analysing trends, comparing groups, or relating variables using statistical analysis, and interpreting results by comparing them with prior predictions and past research.” While this study has a strong qualitative aspect in the development of a central phenomenon (IC_w) the study also required some quantitative aspects as well, specifically, in the collecting and valuation of specific functionings that participants believe IC should be comprised of. Using a narrower set of functionings set out through literature in SI and EI, participants assigned more focused values to the functionings they believe should be part of IC_w. The narrower focus allows for a greater engagement with variables and allows for more accurate valuation of traits.

3.5 Research Design - Mixed Method

From the discussion above it is clear that this study has and requires aspects of both qualitative and quantitative research, and so when choosing a research design for the study, the mixed method approach is the most appropriate.

> “*A mixed methods research design is a procedure for collecting, analysing, and “mixing” both quantitative and qualitative methods in a single study or a series of studies to understand a research problem (Creswell & Plano Clark, 2011).”* (taken from Creswell, 2012, p. 535)

Qualitative and quantitative research methods have traditionally been discussed as separate ends of a continuum; polar opposites with each method being supported by groups from likewise different fields of study. However, in the middle of these two polar points lies the mixed method strategy that promotes the idea that these two methods can be, and should be, used in conjunction with each other to promote a greater depth of research.

> *"The goal of mixed methods research is not to replace either of these approaches but rather to draw from the strengths and minimize the weaknesses of both in single research studies and across studies."* (Burke Johnson & Onwuegbuzie, 2004, p. 14-15)

Due to qualitative and quantitative inquiry being seen to require separate *world views* and assumptions about knowledge there has been resistance to the compatibility of the two methods. This is called the paradigm debate (Creswell, 2012) and while there are those who still believe in incompatibility there are many arguments that support mixed methods design. Reichardt and Cook (1917, taken from Creswell, 2012, p. 537) gave the argument that the two world views – objective for quantitative and subjective for qualitative – were not really mutually exclusive as in every situation with human interaction there is both an objective reality and a subjective one. Another argument for mixed method design in research is for researchers to acknowledge the different worldviews in each data collection method used which highlights the importance of the worldview but allows for different methods to be used.

Sale, Lohfeld, & Brazil (2002) suggest that qualitative and quantitative methods can be very useful if they are used in a complementary way to focus on different phenomena, and discussed how mixing both qualitative and quantitate methodologies can work harmoniously. Burke, Johnson & Onwuegbuzie, (2004) gave this definition of mixed methodology:

> *"Mixed method research… the class of research where the researcher mixes or combines quantitative and qualitative research techniques, methods, approaches, concepts or language into a single study."* (Burke Johnson & Onwuegbuzie, 2004, 17)

This study required a mixed methods approach albeit with a greater emphasis on the qualitative side of the continuum. In researching the first question of the study, namely: What are the competencies/functionings that constitute ICw as a concept in the South African private higher education context, a qualitative approach was required as an interpretation of what constitutes IC_w would need to be generated. Using the current findings and workings of the CA as a starting point and then combining that with the desired functionings/competencies that PHEIs focus on developing, a set of specific IC_w functionings can be generated. This was done through the analysis and interpretation of policy documents from the PHEIs. Semi-structured interviews with directors, principals and educators of higher education institutions were required because the unwritten or unrecorded expectations on what functionings/competencies programmes are producing or hoping to produce needed to be explored. These qualitative measures helped define the key capabilities and competencies that higher education institutions value. By then finding

commonalities and similar perspectives from the interviews, document analysis and review of literatures, a justifiable set of competencies/functionings was defined. This data was collected from a variety of different PHEIs and their representatives in Johannesburg, South Africa.

A quantitative research approach was needed in the moving from interpreted competencies/functionings to evaluation questions for an assessment tool, statistical analysis of results and the development of indicative scores that represent the level of IC_w engagement in an educational context. This is the focus of the second research question. Through the use of multiple, purposeful sampling, participants in the study would undergo highly structured questionnaires to indicate the value they place on the generated competencies. Through statistical analysis, those competencies/functionings that have been assigned the most value across the samples would be given more focus and placed at the core of the IC_w assessment tool. To help with the design and development of the assessment tool, previously established assessments that have successfully assessed other, similar or identical traits were utilised to provide guidance (Boyatzis et al., 2002; Maton, 2014a, 2018a; Sternberg, 2005). In this study, qualitative methods were used to establish potential competencies of IC_w, while quantitative methods were used to verify and statistically support the valuation of the proposed competencies.

It is important to note that mixed methods research is not simply the presence of both qualitative and quantitative research in a study but rather the ways in which the integrating, linking and embedding the two methods occurs to produce findings and results. Creswell and Clark (2011) gave four major types of mixed methodology design namely, Triangulation, Embedded Explanatory and Exploratory designs.

The categories of mixed method design do vary from author to author and even in a later book Creswell (2012) expanded the four to six which included the transformative design and the multiphase design. All the categories and their variations focus on the sequencing of the research and the priority that each method is given. Figure 3.1 illustrates the differences in sequencing and priority given to either qualitative or quantitative. The designs are a summary of the diagrams given by Creswell & Clark (2011).

The triangulation design is the most commonly used type as it requires gathering complimentary data on a topic using qualitative and quantitative methods. Qualitative and quantitative methods are run concurrently but separately and then the results and findings are then used together to form an overall finding or conclusion. The priority to qualitative and quantitative can be equal or slightly skewed to one side depending on the focus of the research. While this is the most

commonly used it is not suitable for this study as the priority is on the qualitative aspect with a smaller amount of quantitative methodology with the quantitative aspect supporting the qualitative findings.

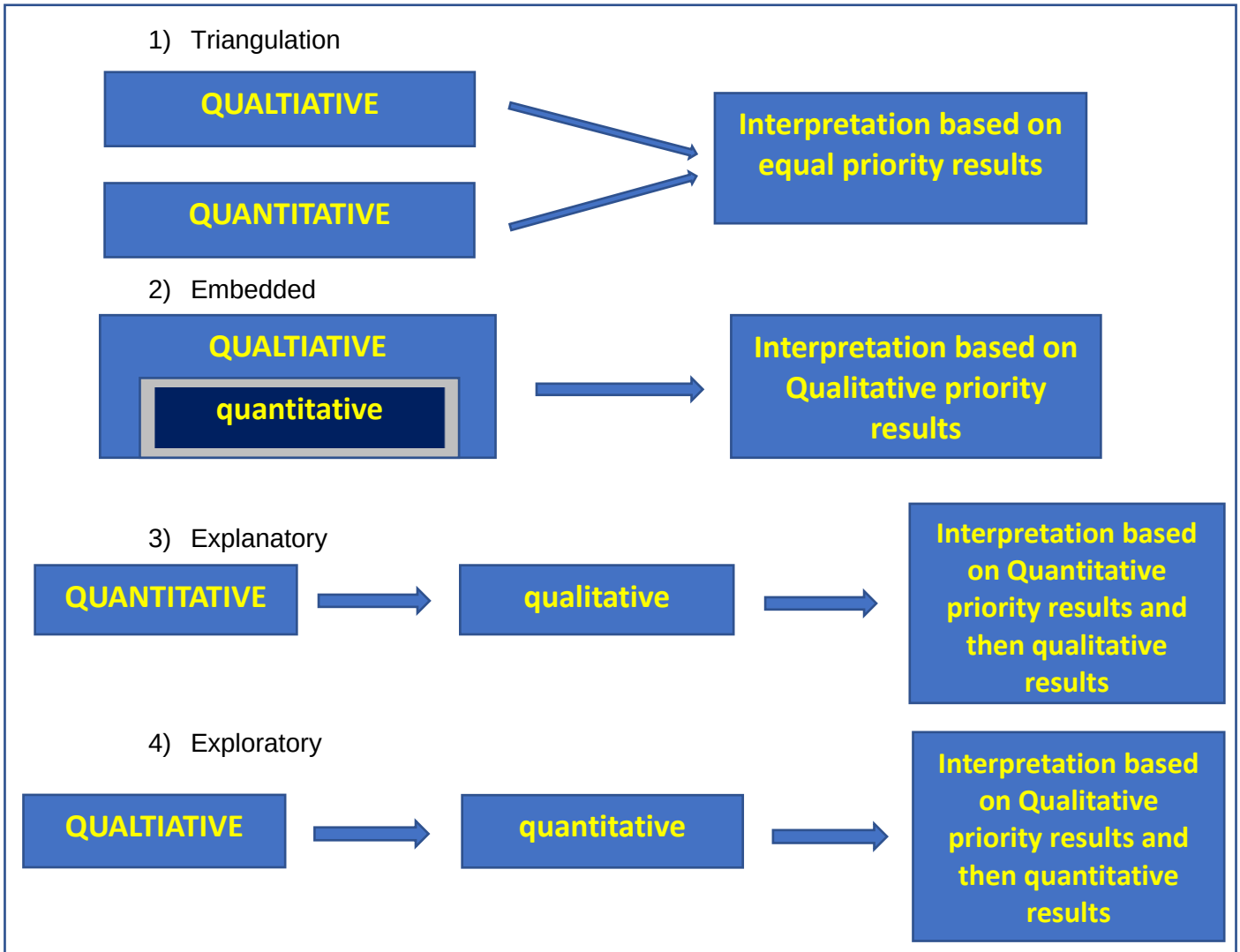

Figure 3. 1 Diagrams of mixed method research design categories. Capitalization denotes priority in the research design.

According to Creswell and Clark (2011, p. 67) the embedded design is *"a mixed method design in which one data set provides a supportive, secondary role in the study based primarily on the other data type."* In this study the development of the central phenomenon IC_w is the primary research point which is requires a qualitative focus. Through the collection of a variety of

subjective opinions from relevant stakeholders through predominantly qualitative methodologies, the quantitative aspect played a supportive role in the aggregating of responses and findings. The key differing point here is that the Embedded design is a single-phase design where the qualitative and quantitative are used in conjunction to produce results and findings together. This study requires a two-phase approach where the first data set will influence and guide the second data set as the central phenomenon of IC_w has not yet been refined. This also means that the Explanatory design which is used for explaining existing phenomena using quantitative data as a priority is not useful by default. Thus, the most appropriate mixed method design for this study is the Exploratory design.

The Exploratory design is a mixed method design that has two phases: a qualitative phase followed by a quantitative phase. The key aspect here is that the first data set will inform the second data set. According to Creswell and Clark (2011, p. 75) the design is best used when exploring a central phenomenon where "*Measures or instruments are not available, the variables are unknown, or there is no guiding framework or theory."* In this study qualitative research is needed to first and foremost develop a contextual definition for IC_w before any other data sets were explored or collected. In order to answer the first research question, there first needs to be qualitative inquiry before quantitative methods can help support the findings. This included methods such as interviews, document analysis and thematic analysis. While this study uses the conceptual framework of the Capability Approach, the central phenomenon of IC_w needed to be created and developed using the surrounding literature and the qualitative data collected. The variables that constitute the phenomenon had not yet been established; a clear justification for the use of the Exploratory mixed methodology. To answer the second research question about developing an assessment for IC_w engagement the findings of the qualitative inquiry would need to be established first, before being supported by quantitative methods. In this study, once IC_w and the key components are established through research and semi-structured interviews, fully structured questionnaires with quantified valuations were used to support valuations of competencies/functionings of IC. This, again, leads the study towards the Exploratory mixed method design as the most appropriate methodology.

3.6 Research Strategy

In conjunction with the Exploratory mixed-methodology explained in the previous section, the study utilised and followed the logical strategy originally proposed by Charles S. Pierce at the

beginning of the 20th century. According to Pietarinen & Bellucci (2014), Pierce posited that there were 3 broad kinds of logical reasoning within research namely, abduction (retroduction), deduction and induction.

> *"It is well known that Peirce explicated the logic of science by dividing scientific reasoning into three general kinds: abduction (or retroduction), deduction, and induction. It is also well known that these are, for the late Peirce, three stages of inquiry rather than different kinds of inferences: first comes abduction, the process of forming an explanatory conjecture, then follows deduction which calculates the consequences of the hypothesis, and finally comes induction, in which the consequences of the hypothesis are put to the experimental test."* (Pietarinen & Bellucci, 2014, p. 353-354)

For Pierce, scientific research required all three stages of reasoning in order to form a cohesive explanation of the truth. According to Kimbell (2015) deduction in the logical pathway that begins with a theory, rule or principle and then infers a result within a specific case. Conversely, induction experiences a specific case and then creates empirical generalisations, which in turn can be used to support a new theory rule or principle. Both deduction and induction require the identification of a phenomenon in order to proceed and this is where retroduction fits in. Retroduction is a reasoning that is less rigid than the other two and looks to initiate an idea or train of thinking which lays the platform for deduction and induction to take place.

> *"Retroduction represents an attempt to combine the best of these two research processes to make valid representations of social life."* (Sæther, 1998, p. 246)

Retroduction is the process of academic, careful conjecture that initiates inference and inquiry into a surprising fact or consequence (Pietarinen & Bellucci, 2014). From this reasoning, further, more structured investigation can occur. Kimbell (2015) provides a table derived from Barry & Hansen (2008) which illustrates the research strategy process according to Charles Pierce.

This study in particular utilises retroduction (abduction) in that it is looking to develop a concept that as yet does not exist in its conceptualisation. When faced with the challenge of trying to improve education within a CA framework, IC_w offers ideas that initially make sense and are naturally agreeable. There is however, no existing data or facts to corroborate this idea and so the reality is that this study looks to develop the concept of IC_w to the point where more detailed, structured deductive and inductive research can take place. That is not to say that deductive and inductive reasoning is not used in the study itself. As the study uses the exploratory mixed-

methodology, there is a need for both deductive and inductive reasoning. In order to frame the concept of IC_w, theories of intelligence and emotional intelligence are used to develop generalised aspects in which IC competencies are associated with. During the qualitative interviews, the theory is then applied to the empirical data of the interview responses. During the quantitative interviews, data is presented in the form of numerical valuations of such competencies which then leads to empirical generalisations of the type of competency that are highly valued in IC_w. However, as said previously, while there are inductive and deductive elements to this research, the study as a whole is primarily based on retroduction reasoning.

Table 3. 1 The three stages of reasoning

Inference	Process	Relationship to theory	Examples based on this approach
Abduction	Creates tentative explanations to make sense of observations for which there is no appropriate explanation or rule in the existing store of knowledge	Does not start with explanations but instead links things together to generate an order that fits the surprising facts - the beginning of theory-building	Lean start up, grounded theory, ethnomethodology, machine learning, hypothesis-free a-b testing, design thinking, constructive design research, prototyping, cultural probes
Having developed a guess, explore the consequences via deduction			
Deduction	Taking a general rule and seeing what follows in particular cases	Top down: Explores the necessary consequences of a rule	Randomised control trials, experiments in the natural and physical sciences
Now make observations to see if the rule and the consequences hold via induction			
Induction	Looking across cases and data to produce a rule or pattern	Ground up: Has a theory in mind and seeks confirmation across cases	Surveys, cases, interviews

Retrieved from: Kimbell, L. (2015). Abductive policy making. Draft section of report from research fellowship. Research Design for Policy. https://researchingdesignforpolicy.wordpress.com/2015/07/07/abductive-policy-making-draft-section-of-report-from-research-fellowship/#_edn3

3.7 Participants and Research Site

The participants from this study can be categorised into three categories. The first is Private Higher Education Institutions (PHEIs). There were 5 participant PHEIs in Johannesburg, South Africa in total. Traditionally, PHEIs tend to offer more professional or industry focused qualifications, with their business models being based on the development of good, ready professionals to enter the particular industry. Due to this, the chances of finding relevant, competency-based discourse are greater than for more general, broad qualification public institutions. Three of the PHEIs were industry focused, namely, hospitality, marketing and advertising, and fashion. The other two provided qualifications across a number of industries and fields of study. Two of the institutions have singular private owners, while the other three are owned by a larger education organisation. All institutions have been in existence for over 20 years and are fully accredited with the Department of Higher Education and Training (DHET) and Council on Higher Education (CHE). The 5 participant PHEIs catered to a wide range of students coming from multiple ethnicities, geographic locations and socio-economic backgrounds.

The second category of participants is the PHEI representatives. These representatives are the professionals who work at the PHEIs and are responsible for the development of their students. These include educators, qualification managers, or directors that work for the institution with direct responsibilities towards the education of the institution's students. The study enlisted the aid of two professional participants from each institution for the semi-structured interview. For a breakdown of the PHEI representatives' educational details see table 4.5 in the interview findings section in Chapter 4. In one institution, the participant, while verbally interested to participate, was not able to attend the interviews. As a result, a total of 9 professional across the 5 PHEIs was used. As discussed in previous chapters, there appears to be a disconnect between what competencies the South African labour market are demanding and what is being produced in South African higher education. The bridge between those two articulations are the professionals whose job it is to develop such competencies in their students. The PHEI representatives are not only aware of their subject matter and the field they work in and what is required to function successfully within that field but are also aware of educational practices and goals. They are uniquely positioned and best placed to develop desired competencies within the students, knowing the weakness, strengths and continuing issues the students face year-on-year. The PHEI representatives are best placed to reveal such desired competencies and through a semi-

structured interview, their perspectives, knowledge and experiences can best be extracted and utilised.

The first two categories of participants formed the qualitative side of the mixed-methodology, while the third category of participant formed the quantitative part. This category consisted of students from the five participant PHEIs, whereby a combined total of 120 students from across the five institutions took part in a highly structured questionnaire. The students were a minimum of 18 years old and were currently enrolled in one of the institutions' academic programmes. Contact with the students was made primarily through digital mediums with the aid of the institutions' internal channels, with some instances of direct explanation with the students. One of the key tenets of CA is that individuals should have the capability to enact their valued functionings. This means that the individuals need to have input into what these functionings are. In trying to establish which work-based functionings constitute IC_w the students who are looking to improve and enact these functionings should likewise have input. While the main way of revealing the valued functionings that constitute IC_w was done through the first two categories of participants, the students were provided the opportunity to refine the selection through the valuation of the presented functionings in relation to their career success.

From the information gathered from the PHEIs, the PHEI representatives and the students, the basis for establishing a final, contextualized definition of IC_w and the functionings that comprise it was established and formed the basis for the creation of the IC_w assessment tools.

3.8 Sampling

When conducting research of a population the logistics of such an endeavour are vastly more than what the researcher is capable of. As a result, sampling is a valid and necessary tool for conducting research on a more manageable scale.

> *"A sample is a subset of the population, selected so as to be representative of the larger population."* (Acharya, Prakash, Saxena, and Nigam, 2013, p. 330)

According to Taherdoost (2016) when conducting research there are two broad categories of sampling to consider. The first is probability sampling which means that every item in the target population has an equal chance of being included in the sample. While the main benefit from this

is less room for bias, it is problematic in terms of logistics, as well as involving individuals without the knowledge or experience base that is required by the study. The second category is that of non-probability sampling which is best used when examining real life phenomena. This type of sampling aligns itself with more qualitative and interpretivist inquiry.

Due to the nature of this study, two types of non-probability sampling were used. The first is convenience sampling. This type of sampling is the most commonly used type of sampling that allows for the choosing of participants based on ease of accessibility (Acharya et al., 2013). While this does make conducting the research easier, it does have limitations as the variability and the bias cannot be measured. As the researcher was limited in travel, time and resources, this was the best choice to achieve results. As a result, the 5 participant PHEIs were located within 1.5 hour drive of the researchers location in Sandton, Johannesburg. Fortunately, as Gauteng is the most densely populated province in South Africa, there were many options of PHEIs to engage with.

The second type is purposeful sampling which is a strategy in which particular settings persons or events are selected deliberately in order to provide important information that cannot be obtained from other choices (Taherdoost, 2016). In the development of IC_w, it is vital that PHEI representatives were utilised as they hold the key insight required to develop the concept further. The PHEI representatives were selected across a variety of educational fields, qualifications and positions to broaden the scope of the information collected. Once permission to conduct research with the PHEIs were granted, the institutions generally assigned a lead contact to help organise the access to documents and schedule interviews. Each PHEI representative was selected for their focus on different fields and industries, namely, hospitality, marketing and advertising, fashion design, computer science and business administration. This is to ensure that the functionings were not specific to a particular field of study.

Purposeful sampling was also used for the participant students for the valuation questionnaire. The students who were part of those qualifications were asked to take part in an online highly structured evaluation questionnaire. These are the students who are currently dealing with and developing the key competencies they feel will help them achieve their valued functionings in their careers. The study is contextualized within private higher education institutions (PHEIs) and as such, research sites and participants are chosen with purpose in order to uphold the validity of the study. This study interviewed 9 PHEI representatives and surveyed 120 students across 5 PHEIs.

3.9 Data collection methods

There were three data collection methods used during this study.

1. Document analysis

According to Schumacher and McMillan (2010) document analysis involves the analysis of the written or visual content of a document. (Bowen, 2009) goes further when he defines document analysis as

> *"… a systematic procedure for reviewing or evaluating documents—both printed and electronic (computer-based and Internet-transmitted) material."*

The key difference with Bowen's definition is the idea that document analysis is a systematic procedure. This means that a document analysis is not just a reading of texts, but rather a planned and purposeful engagement with the texts and their relevance to a chosen topic or focus. Bowen (2009) provided a number of advantages to using a document analysis in research. Firstly, it is quite efficient. By focusing on only relevant information, researchers can pour through a number of documents while only focusing on the selected topics or texts. It is also cost effective and readily available. The most valuable advantage, specifically in this study's case – is that document analysis is exact. Documents often include the exact names of terms, references, and concepts that allow the researcher to further improve their research and broaden their knowledge of the topic. This exactness helps in the development of IC as valued competencies and terms provide direction and clarity for the concept.

The disadvantages according to Bowen (2009) are that documents often have insufficient detail due to the fact that their purpose is not related to research. They are more often specifically designed for marketing, administration or legal purposes, which means researchers will need to analyse more documents in order to piece the puzzle together. The other major weakness is the biased selectivity of the documents. The documents have a specific purpose and are therefore likely to be aligned with policies, principles and agendas of their creators. Researchers need to take this into consideration when analysing documents in order to counter any innate bias.

Document analysis was used to analyse the educational policies and documentation of the five participant institutions. Table 4.1 in Chapter 4 indicates the type of documents that were accessed by the different PHEIs. These policies are developed as part of the legal registration of the PHEI,

and as such are specifically designed to explain how the institution will conduct its educational processes, specifically highlighting the values of the institution in terms of educating their students. This then provided insight into which potential competencies of IC_w are most valued in each institution and allowed for comparison between them. This, along with the review of literature, was then used as a starting point from which to develop the interviews with PHEI representatives.

2. Participant interviews

Interviews are a staple of qualitative research and have been utilised in various forms for decades. According to (Roulston & Choi, 2018), interviews are "question-answer sequences" that are structured by the researcher in order to collect information or data. They continue by explaining how

> *"…interviews range from tightly structured format of standardized survey interviews in which questions are asked in a specific order using the same format, to semi-structured interviews, in which the organisation of topics is less tightly formatted… At the other end of the spectrum from standardised or structured interviews are unstructured interviews, in which interviews are loosely formatted."* (Roulston & Choi, 2018)

Essentially the three broad types of interviews each provide a different way of collecting data. For this study, the semi-structured interview was chosen because of the objective of developing the concept of IC_w. Semi-structured interviews involve a pre-existing set of questions and allow the interviewer the flexibility to deviate and probe further if the need arises (McMillan & Schumacher, 2010). In such interviews there are few prepared questions, and the interviewer will phrase questions during the interview according to the responses of the participants. Semi-structured interviews were used in this study because they allow for carefully prepared questions which ensure that all the areas of interest are covered, i.e., the valued competencies of IC_w, but also allows the interviewer space to deviate and probe further, which allows for more detailed information to be obtained. This was particularly useful as different participants used slightly different terminology or explanation to describe or explain similar concepts. The ability to follow up on those points allowed for greater clarification. See Appendix 1 and 2 for a copy of the interview, as well as the interview transcripts which were transcribed personally.

The interviews represented the qualitative aspect of the Exploratory mixed-method design (Creswell & Clark, 2011) of the study. It is important to note here that the interviews were

conducted in a way that would be best understood by the participants. CA and its terminology are not widely known at this stage, and so rather than asking the PHEI representatives to try and respond with terms of a framework they are unfamiliar with, more everyday language was used. Hence the questions of the interview utilised terms of competencies and traits instead of functionings and the more nuanced concept of capabilities to allow for deeper understanding and insight from the participants. This is also the reason why the direct asking of what work-based functionings would constitute IC_w. The educators would need to have been educated on CA, IC DC, and any other educational theories which would have potentially skewed their responses. It is then on researcher to aggregate and organise their responses into the CA framework. The pre-existing questions were generated from the review of literature and the document analysis. Table 3.2 below shows how the questions for the interview were developed. Space was then assigned for follow-up, clarifying, unexpected-yet-relevant or interesting questions in order to enrich the collected data. The findings of this were then used to develop the quantitative part of the Exploratory mixed-methodology.

Table 3. 2: **Table showing the link between topic of interest, the specific literature and example question in the development of the interview schedule**

Topic	Literature reference	Example question
Student preparedness for higher education	(Case et al., 2013; Council on Higher Education, 2013; Department of Higher Education and Training, 2018; Wilson-Strydom, 2011)	In your experience, are the new students suitably prepared for higher education? Please explain your answer.
Key competencies that are lacking from students	(ManpowerGroup, 2015; *Mission Talent Mass Uniqueness: A Global Challenge for One Billion Workers*, 2019; O'Neil Jr, 2014; Stephenson, 2012)	In your opinion, what are some of the key competencies that are lacking from newly inducted students? Please could you elaborate?
Overt signs of incapability in students	(Amnesty International, 2020; Comim, 2001; M. Nussbaum, 2000; M. C. Nussbaum, 2006; Robeyns, 2005)	What are some of the behavioural signs that students do that indicate an inability to cope with higher education?
Current competence environment	(Comim, 2001; M. Nussbaum, 2000; M. C. Nussbaum, 2006; Robeyns, 2005)	Please give an example of how your institution looks to develop competencies outside of the classroom.
Ethos of competency development at the PHEI	(Department of Higher Education and Training, 2018; Robeyns, 2005; van Broekhuizen et al., 2016)	In your opinion, is the development of any of the competencies you have mentioned promoted in the general ethos of the institution?

Competencies Valued by the PHEI representatives	(ManpowerGroup, 2015; M. Nussbaum, 2000; M. C. Nussbaum, 2006; Stephenson, 2012; Vaughan & Walker, 2012; Walker & Nguyen, 2015)	What are the personal / professional / cognitive / emotional competencies that you most value in your students?

3. Questionnaires

Questionnaires are very common tools when conducting research, specifically quantitative research. The goal of this is to find information that either supports or contradicts a proposed hypothesis.

> *"…researchers collect quantitative, numbered data using questionnaires (e.g., mailed questionnaires)… and statistically analyze the data to describe trends about responses to questions and to test research questions or hypotheses. They also interpret the meaning of the data by relating results of the statistical test back to past research studies."* (Creswell, 2012)

Questionnaires can be either open-ended or closed-ended (Creswell, 2012). Open-ended questionnaires tend to be used in more qualitative research as they allow for deeper insight into the thinking behind the response to the questions. The closed-ended questionnaires do not allow for this deeper insight, but rather focus the participant on a specific set of responses that can be quantified, valued and interpreted for meaning from a wider group of people. This study used a close-ended questionnaire for two main reasons. The first was that the semi-structured interviews are used in order to gather deeper insight into the concept of IC_w competencies. Secondly, with the Exploratory mixed-method design (Creswell & Clark, 2011), the quantitative takes place after the qualitative research and is used to either support or argue against the findings. This means that the questionnaire would need to be focused on the competencies taken from the interviews and see what levels of agreement or disagreement were prevalent amongst the PHEI students. The questionnaire was chosen for the convenience of time, accessibility and comparison of data. In this case, an online questionnaire was sent to the students through the institutional mailing lists from each PHEI (see Appendix 3 for the survey template).

The competencies that populated the questionnaire were taken from the document analysis, review of literature and interviews. Tables 4.2, 4.3, 4.4, and 4.6 in Chapter 4 provide these competencies. These were then refined down to 10 of the most commonly appearing and discussed competencies in each of the 4 categories of personal, professional, cognitive, and

emotional competencies for specific focus. These were then presented to the students to value them on a scale from 1 to 10 on its importance to their professional development and careers. Questions 5 and 6 of the questionnaire were developed from the interview responses on the topics of Current competence environment and Ethos of competency development at the PHEI. These were supporting questions that looked to provide insight on the perception of the students of how their institution was currently dealing with the development of the valued competencies. The findings of the questionnaire were then used to expand on the valuation of the competencies (functionings) of IC_w discovered in the document analysis and interviews which resulted in a more comprehensive mapping of the IC_w functionings. This provided a strong, clear, more comprehensive definition of IC_w and was invaluable when developing the IC_w assessment tools.

3.10 Data collection plan

The data collected was done in two parts that delt with the each of the two research questions. The first set out a process of identifying the relevant functionings of IC_w that provided our contextualized definition of IC_w. The second was to develop an assessment tool to assess IC_w engagement levels in educational contexts. The plan for the collection of data is illustrated in figure 3.2 and 3.3 below. The plan for the collection of data was to first establish contact with five PHEIs and seek their agreement to be participants in this study. A detailed explanation of the core concepts, goals and processes of the study was explained and then consent from the institutions established. Anonymity and security of information was of paramount concern and any such processes that needed to be followed either by the university or the institution were done accordingly. Once the institutions agreed, an analysis of the relevant documents from the institution took place. Using the findings from the document analysis, the semi-structured interview was generated and two professional participants were scheduled for an interview. Unfortunately, one of the participants was not able to participate in time and so only 9 of the original 10 were interviewed. From this data, a thematic analysis took place to help the production of the student questionnaires. A mixture of both statistical analysis and thematic analysis was utilized when reviewing the collected data. Braun and Clarke (2006, p. 6) described thematic analysis as:

"… a method for identifying, analyzing, and reporting patterns (themes) within data. It minimally organizes and describes your data set in (rich) detail."

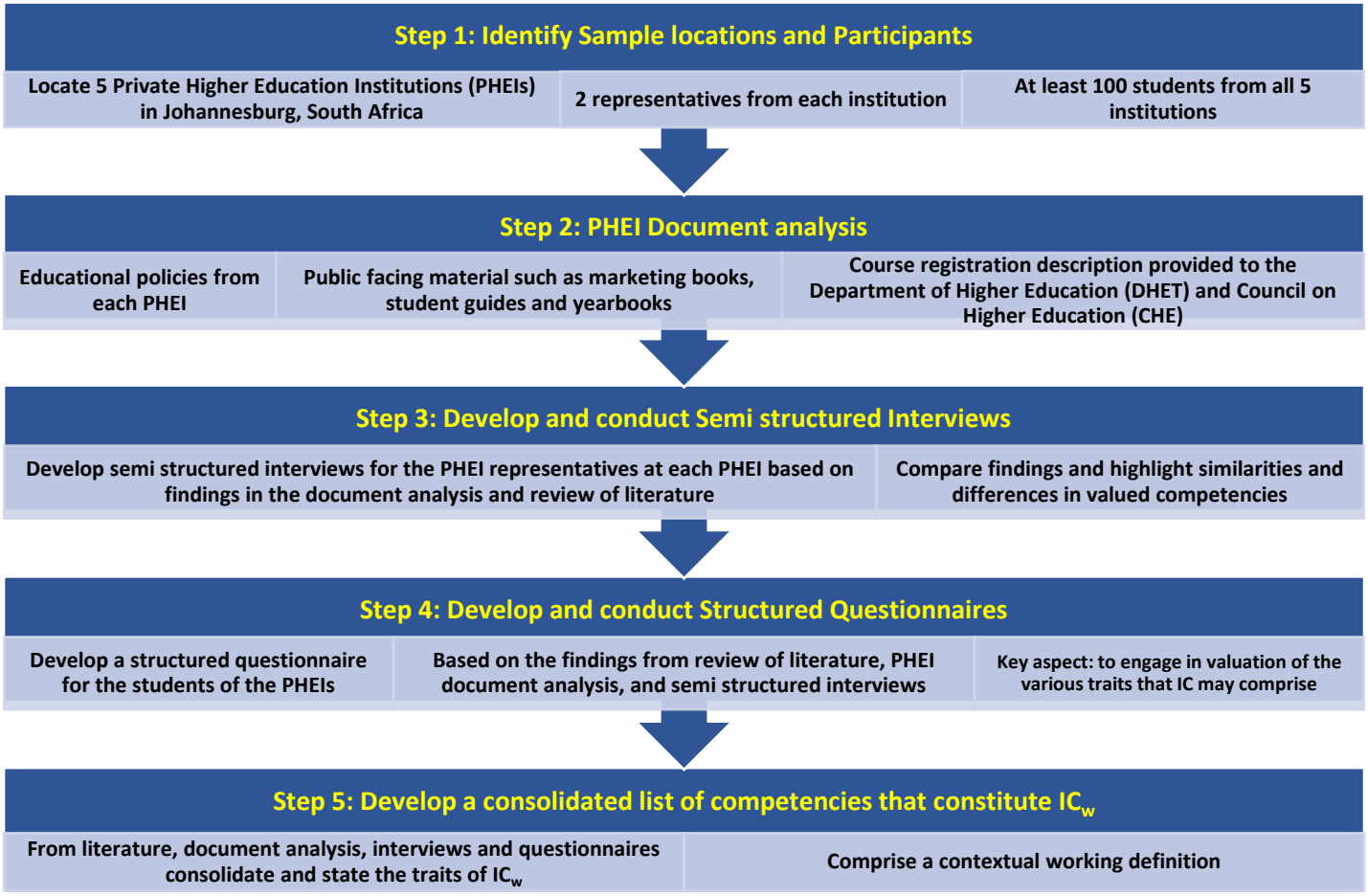

Figure 3. 2: Data collection outline for research question 1-establishing IC_w competencies

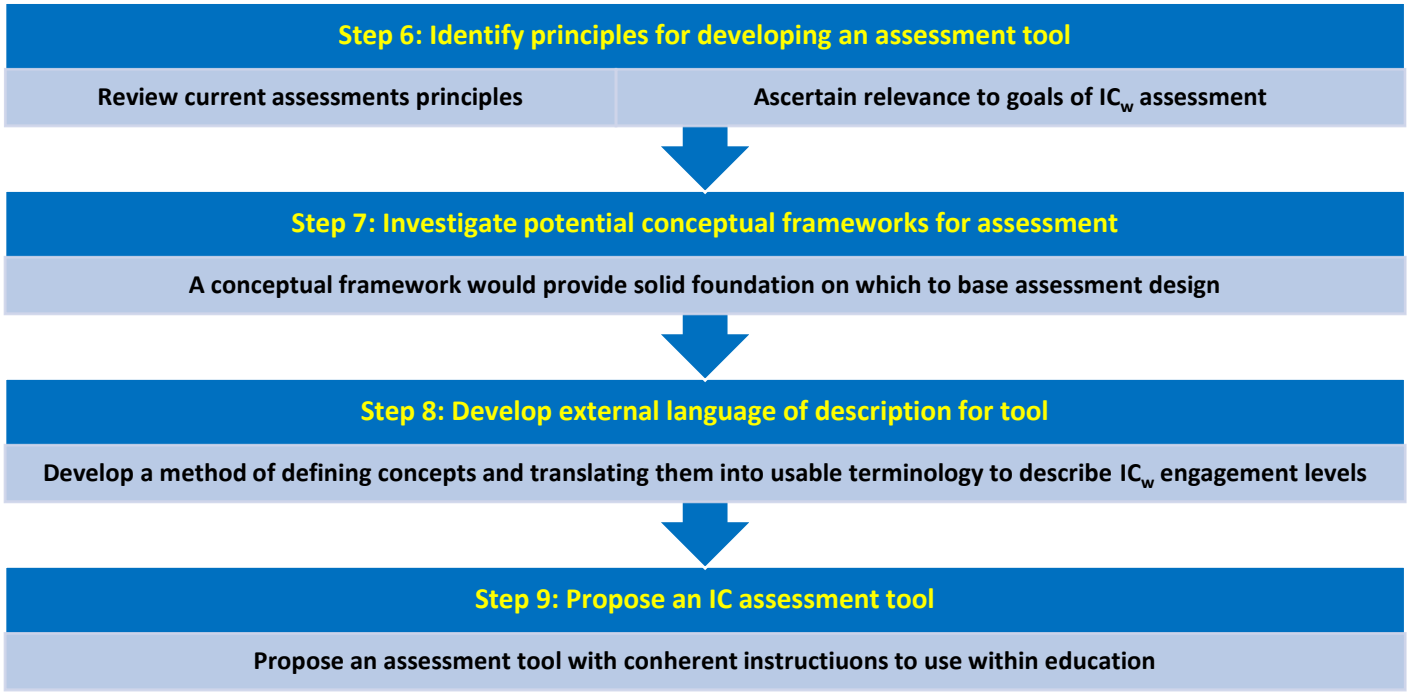

Figure 3. 3: Data collection outline for forming the IC_w assessment tools

Braun and Clarke (2006) provide a six step approach to conducting a thematic analysis of data that this study utilized to form the basis of the analysis:

1. Become familiar with the data

Familiarity with the collected raw data allows for immersion into the topic of study which is vital for more accurate selection of major themes. Through the document analysis from each of the institutions, I became familiar with each of the participant institutions: their core business, academic offerings, their history and educational policies. This allowed for additional context to be developed when analysing the responses to the interview.

2. Generate initial codes

Look to select and generate as many major themes as possible. Broad and slightly off topic themes will help offer richness to the data and offer perhaps unthought-of or unforeseen patterns. Filter through these primary choices in order to start further investigation into more aligned themes. Key competencies that arose in the documents were tabled and recorded which then provided a starting point for discussions in the interviews. It was argued in Chapter 2 that IC_w was comprised of three broad aspects which were cognitive, emotional and personal/professional traits. For the purposes of broadening the initial net for competencies, the initial codes used for the document analysis were cognitive and emotional, and then personal/professional was split into individual categories. The inclusion of an additional category was used in the document analysis as some of the competencies mentioned were difficult to categorise. This was termed the “Other” category. These categories were then used in the interviews to help guide the discussion on valued competencies.

3. Search for themes

With the initial list of themes selected, search through all the data in order to locate these themes in the different contexts. This allows for theory-based themes to be brought to the surface or put aside as the presence or absence of themes becomes apparent. During the transcription and reviewing of the interviews, a number of themes arose. Key interview questions were generated from the literature (see Table 3.2, p. 79) and these provided the initial themes, however, there were two other themes that arose that were not directly in line with the questions. The first was the notion of different types of articulation gaps discussed and explained by the various participants and the second was the type of discourse that the participants used in the interviews. These are discussed in more depth in chapters 4 and 5.

4. Review themes

Consolidate the findings of the search with the initial list of themes and thoughts to analyse the direction of the themes and the relation of those to the research questions concerned. This allows the researcher to focus the main themes of the data in relation to the report. As discussed above, while the main themes were structured around the literature, document analysis and the objectives of the study, the themes that were not deemed relevant, or particularly interesting were removed from the study to maintain a focussed scope.

5. Define and name themes

Establish a defining categorisation of the theme and thus name it accordingly. Once a name and defining characteristics have been formalised, some data may either fall into or fall out of the category, thus refining the accuracy of the findings, and therefore the validity of the report. The main categories of the competencies were established at the beginning of the research, but the individual competencies that could form part of IC were then stated and defined. These are set out in Chapter 4 in tables 4.2, 4.3, 4.4, and 4.6.

6. Producing the report

Align the named themes with the purpose of the report and research questions, in order to form a valid and credible conclusion to the data analysis. From this process the questionnaire was developed and then given to the students for completion.

The student questionnaire was generated after the interviews and following yet another explanation and process agreement with the students, the students who wished to participate completed the questionnaire. This was done in a digital format which meant minimum disruptions to the educational programme of the institutions.

3.11 Quality Qualitative Research

As alluded to previously, while a mixed method strategy was used, the emphasis was on the qualitative aspect. It is therefore important to ensure the high quality of the research methodologies. To do this, this study embraces “Eight Big-Tent Criteria” model proposed by Tracy (2010). Tracy discusses that these criteria represent the core values of qualitative research and

provide a structure that serves as a guideline for qualitative studies. What follows is an explanation of Tracy's model and how each of the criteria was addressed by the study. It should be noted that Tracy continually highlights that each of these individual criteria are necessary but not sufficient by themselves to indicate the quality of research, but rather through the integration and presence of all eight criteria a qualitative study increases its quality.

Worthy Topic

"Good qualitative research is relevant, timely, significant, interesting, or evocative." (Tracy, 2010, p. 840)

A worthy topic is one that challenges assumptions, provokes interest and is strongly linked with the current status or the future progression of the societal context to which it refers. The research in this study is highly relevant to the current context of education in South Africa. As stated previously, tertiary education in South Africa is not meeting the demands and expectations of the economy and if there in not a change in the fundamental perspective of education, greater problems and further deterioration can occur. This study looks to provide a new path forward in tertiary education that could address such problems, and looks to challenge some of the underlying, taken-for-granted assumptions and processes that perpetuate those problems. From an individual perspective, an education system that aids in the development of IC_w can lead the individual, not only to greater academic opportunities, but to better quality of work life. This research has a strong argument for being deemed a worthy topic.

Rich Rigor

"Applying the concept of requisite variety to qualitative rigor suggests that a researcher with a head full of theories, and a case full of abundant data, is best prepared to see nuance and complexity." (Tracy, 2010, p. 841)

Rich rigor refers to the depth and variety of sources that a qualitative study utilizes. It focusses on the quality of the processes and procedures of a study. The *requisite variety* mentioned in the quote refers to the notion that with a wide variety of data sources as well as larger amounts of data, researchers can gain increased understanding of the nuances of the data which invariably improves the level of detailed analysis. Rich rigor also refers to the validity of the research, its data and its conclusions. Killen (2003, p. 5) describes validity as:

"… a unitary concept that refers to the degree to which a certain inference from a test is appropriate and meaningful."

In essence, validity refers to whether the conclusions presented from a research studies are sufficiently aligned and generated from the data findings and analysis of that report.

This study looks to achieve rich rigor by gathering a variety of data from varied data sources. Data was mined from a number of different higher education institutions, a variety of professional educators from those institutions, as well as a large number of students across the institutions. This was done through interviews as well as document analysis through institution and regulatory body policies. Validity was maintained through the findings and development of assessments through adherence to the APA Standards for Educational and Psychological testing as well as in the careful proposing of conclusions.

Sincerity

"Sincerity as an end goal can be achieved through self-reflexivity, vulnerability, honesty, transparency, and data auditing." (Tracy, 2010, p. 841)

The two key aspects of this, according to Tracy, are self-reflexivity and transparency. Self-reflexivity refers to the researcher being open and honest about the rationale and personal motives around the study. Through discussion about limitations and natural biases that the researcher may be challenged with, the reader can then get greater understanding of how the researcher came to his or her conclusions. Transparency refers to the clarity of how the data was gathered, tests administered and any auditing of findings that may or need to occur. This study discusses issues of sincerity such as limitations, biases and personal motives at various points in chapter 1, 2 and 3, through engagement with the rationale of the study, data-gathering procedures as well as in-depth discussion on the South African, higher education and private schooling contexts. The self-reflection section in chapter 6 also provides insight into the positioning and perspectives of the researcher from the start of the study through to the end, and how it has evolved with the process and findings of the study.

Credibility

"Credibility refers to the trustworthiness, verisimilitude, and plausibility of the research findings." (Tracy, 2010, p. 842)

According to Tracy, qualitative research achieves credibility through the application of three practices. The first is that of thick description. Thick description refers to the importance of meaning of an observed behaviour or interaction in relation to its context. Descriptions of events require detailed explanation of the subtle nuances of the surrounding context that give the event relevant and precise meaning. Without it, events may be misinterpreted and mistakenly assigned a different meaning. What is more, thick description should give enough data and information about the study for the reader to come to their own conclusions. This is done through a detailed presenting of the data and findings, and it is this detailing and sharing of tacit knowledge that the reader themselves can draw conclusions and permutations. This study endeavours to offer thick description through discussion of the education context in South Africa, the role private higher education institutions play in developing young professionals, and what guides these institutions. Moreover, through a thorough engagement and explanation of CA and how IC fits in with the CA framework, the reader can then follow the development of IC. The study also provides insight and discussion into the development of the assessment tools through the framework of Legitimation Code Theory (LCT).

The second aspect practice is Triangulation and Crystallization. Triangulation refers to the practice of using two or more methods to analyse data, and if the conclusions drawn are similar then the conclusions are more credible. Tracy makes the point however, that in qualitative research where the very method of interpretation will have an impact on the findings, triangulation does not really translate well. Rather triangulation is used as an indicator of the research using multiple and varying data sources, methods of gathering data, and levels of analysis. Crystallization is a more intricate version of this however it does not look for these varying aspects to deliver similar results. Rather it looks to enrich the findings in order to add greater depth and understanding to the research and its conclusions. This study utilises a variety of methods of data gathering and analysis from both a qualitative and quantitative perspective. Firstly, qualitative methods were used to deepen IC as a concept, and then these findings with be supported by quantitative questionnaires. This adds further depth and credibility to the concept of IC_w. The research focuses more on a crystallization approach, rather than triangulation in order to obtain deeper understanding of IC_w.

The last practice that adds to the credibility of qualitative research is Multivocality. While similar to crystallization, multivocality refers to the variety of different verbal perspectives,

analyses, and opinions that help shape both the data and conclusions of the research. According to Tracy, multivocality is achieved through the highlighting of similar and contrasting viewpoints or perspectives, as well as through collaboration with the participants. In this study data was sourced not only from institutions through the document analysis, but from educators and students within those institutions. Information, rationale, and processes were shared with all participants in order to put them at ease with the study and encourage personal engagement and honest opinion. With the 9 PHEI representative interviews and the 120 students, multivocality plays a strong role in this research.

Resonance

"…refers to research's ability to meaningfully reverberate and affect an audience." (Tracy, 2010, p. 844)

Tracy discusses that high-quality qualitative research should make some impact on the reader and gives two practices that she believes resonance tends to be achieved with. The first is aesthetic merit. This refers to the writer's ability to put forward the information and data in a compelling and cohesive manner that presents the story of the researcher within the journey of the study. It evokes engagement from the reader through clear structures, strong links between concepts as well as developing a sense of the researcher as a person with a story to be understood. The second is Transferability which refers to the overlap between the goals and aims of the research and the current situation, feelings or context of the reader. Resonance is achieved when the writing style and data findings combine to overflow the original design parameters into the lives of the readers. This study has the structures and guidelines for research reports of WITS university to help develop the way it presents its story. The main way this study develops resonance is through the link between the concept of IC_w and how it relates to South African higher education. Education is currently a very hot topic of social and political conversation, and through addressing this topic for a new perspective, the chances of achieving study/reader overlap is increased.

Significant Contribution

Tracy discusses that quality research should have a significant contribution not only to the academic field the research in which it resides, but to the professional practices and social environments as well. To help determine this, Tracy discusses the different types of

significance a study should embrace. The first is theoretical significance which is that a study is required to go beyond merely the application or reapplication of a concept but rather builds or evolves the concept in relation to different problems or challenges in different contexts. This study looks to build on the basic concept of IC_w and both refine and define the nuances of the concept. It looks to take aspects from intelligence, emotional intelligence and personal/professional traits desired in South African businesses to generate a new understanding within the context of education. It also looks to progress the growth and interest of the Capabilities Approach to education and how it can be better applied within education practice.

The second is heuristic significance which looks at how the research study provokes further research or development from the findings. Currently, there are already significant developments in the Capabilities Approach field with Walker & Nguyen (2015) developing "capabilities-friendly" assessments and protocols that develop student's capabilities better than current practices. It is the hope and expectation of this study that by establishing IC_w as a foundational aspect of the development of better prepared and capable students, further protocols, pedagogies, assessments and even curriculum designs can be generated for the betterment of South African education.

The next significance is practical significance. This looks at how the study and its findings can be utilized in solving problems in the greater communities of the real world. As stated in the rationale and problem statement, South African education is currently struggling with the level of graduates it is producing. This study suggests that the development of IC_w in higher education students can go a long way in addressing the gap that exists between graduates and the real world of work. By developing an assessment that can indicate the level of IC engagement within educational contexts, it not only can aid the educational development of the student but could also provide a useful tool for institutional analysis for regulatory bodies. Thus, this study believes it has a strong practical significance.

The last type of significance is called methodological significance whereby the study may not necessarily offer exciting new results, but rather a solid methodological foundation for future research to improve upon and utilize for future studies. In developing the concept of IC_w, the context of the study (private tertiary professional education students and institutions) is used to define IC_w. Thus, the method used in the establishment of IC_w can

be applied to different educational contexts, in different nations, educational sectors or educational levels. This study looks to offer a clear method which can be emulated and evolved for future research. The significance of the study is discussed in more depth in chapters 1 and 6.

Ethical Considerations

"We must consider the rightness or wrongness of our actions as qualitative researchers in relation to the people whose lives we are studying, to our colleagues, and to those who sponsor our work. … Naiveté [about ethics] itself is unethical." (Miles and Huberman, 1994, p. 288; in Tracey ,2010, p. 846)

Quality qualitative research requires an understanding and adhesion to ethical standards. This study is cognizant of the ethical regulations and guidelines enforced by WITS University and has adhered to all requirements. These regulations and processes are regarded as procedural ethics which looks at the methodology of the research and how it interacts with the participants of the study in order to minimize any inconvenience, disruption, harm or damage. Key aspects to this are full disclosure of the participants' role and actions during the research, ensuring participation is completely voluntary as well as the clear communication of the goals and aims of the study.

Situational ethics is about the researcher's reaction to the varying situations and unexpected scenarios during the research process. Through clear reflection on morality from individual and societal levels, ethical decisions, behaviours, and relationships can be taken and developed. Specifically focusing on the relationships the researcher forms with the participants is relational ethics. What are the researcher's responsibilities to the participants of the study in terms of information storage and sharing, anonymity and potential future engagement? Exiting ethics discusses what responsibilities the researcher has in terms of concluding not just the data gathering but the future discussions and disclosures regarding the data gathered.

All these have been considered and applied in this study through the adherence to the WITS university ethics committee as well as the ethical practices of the researcher. Ethical clearance was gained from the WITS ethics committee prior to any engagement with the participants (please see the certificate in the Appendix 4). Each participant PHEI, PHEI representative and student were given details of the research in either face-to-face meetings or in writing via email before asking for consent. All participants were 18 years

or older and thus deemed able to provide personal consent. While there were no ethical issues during the study, if any unforeseen problems or conflicts of interest or outcomes did occur, measures were in place in order to ensure ethical research. This would have included being discussed in confidence with the supervisor of the study, and then escalated if necessary to the WITS ethics committee for further consultation. See Appendix 5 for copies of the participant information sheets and consent forms.

Meaningful Coherence

"Meaningfully coherent studies (a) achieve their stated purpose; (b) accomplish what they espouse to be about; (c) use methods and representation practices that partner well with espoused theories and paradigms; and (d) attentively interconnect literature reviewed with research foci, methods, and findings." (Tracy, 2010, p. 848)

This study has clearly stated its purpose and goals in chapter 1. The study has produced a deeper, more comprehensive conceptualisation of IC and has situated it firmly within the framework of CA. It has also produced two IC assessment tools that can eb utilised both in daily education practice and academic, long term research. It is the contention of this study that it has produced research with meaningful coherence.

3.12 Conclusion

This chapter has explained in detail the research paradigm and processes of the study. This study recognises the influence of interpretivist and positivist paradigms in its design, and with the presence and integration of both these paradigms, accepts an overarching post-positivist paradigm for the study. It also discussed the influence of constructivist principles in the overall research design, the development of the data collection tools, as well as the interpretation of the results.

The chapter has explained how the Exploratory mixed-method provided by Creswell & Clark (2011) was best suited to the research into and developing of the concept of IC_w. It has also described the research process beginning with a qualitative approach and then moving into a quantitative approach. A document analysis of some key PHEI documents to familiarize the researcher with the institutions and their values was followed by semi structured interviews with the PHEI representatives. This provides the data on the key competencies that are valued by

higher education professionals, and this then informed the development of the highly structured questionnaire taken by the student participants. The questionnaire provided a quantitative evaluation of the identifies competencies which further refined the competencies that should constitute a more develop conceptualisation of IC_w. Furthermore, this chapter discussed the various quality measures and guidelines that were used in carrying out the research.

The next chapter will present the findings of all three of the research phases: document analysis, interviews, and questionnaires. The chapter will focus on the key findings that are relevant to the research questions and objectives, but also include some findings that peaked interest while not being directly relevant to the focus of the study.

Chapter Four – Research Findings

4.1 Introduction

The research design for this study followed the Exploratory mixed-method research design described by Creswell & Clark (2011), whereby a qualitative phase of research is followed by a quantitative phase. The results are primarily qualitative in nature and then supported or disputed by the quantitative data. In this study, the qualitative research component takes the form of 9 semi-structured interviews with lecturers, content developers, academic coordinators and managers of 5 private higher education institutions (PHEI). The findings of the interviews were then used to shape the quantitative, structured questionnaire that was given to 120 students of the 5 PHEIs. It is also important to note that in the preparation of the semi-structured interviews a document analysis was done for each of the PHEIs. This in conjunction with the review of literature about Independent Capability and related fields forms the basis for the content of the semi-structured questionnaires.

This chapter will provide details on each component of the research process. Due to the very nature of the research being conducted with people, there were naturally some unforeseen deviations from the original plan to avoid inconveniencing or influencing participant responses. While Chapter 3 set out the methodology and planning of the research process generally, this chapter will look to describe what actually transpired during the implementation of the research methodology in more detail. This chapter will also report on all the findings of the research. Not only those that seem to corelate with the specific research questions of the study, but any and all findings that arose during the process. Chapter 5 will then discuss the findings in relation to the objectives and research questions of the study.

An important point to note in the reading of the findings is that, as mentioned in the previous chapter, the term competencies was used in the data collection process to describe functionings. The PHEI documents, representatives and students all worked with and understood the term of competencies and so this was used to data collection process. This was to avoid the potential confusion and misunderstanding that could be caused by the lack of knowledge and understanding of CA. This chapter will utilize the terms as they were used in the data collection process, then in the discussion of the findings (Chapter 5) the findings will be integrated into the

CA framework. To this end, the findings focus on the finding and developing key competencies for graduates. The identified valued competencies that are common or similar across the PHEIs, representatives, and fields of study, will then be revised, organised and formulated into the functionings that constitute IC_w.

4.2 Document Findings

The goal of this stage of the research was for the interviewer to get familiar with each PHEI in preparation for the interview. Another key point was to comb through the documents provided by each PHEI for an indication of competencies that the PHEI's looked to promote in their institutions, methodologies and policies. These would form a basis for the identification and formulation of IC_w work-based functionings later in the research. As part of being a registered PHEI in South Africa, there are certain documents which are required by the Council for Higher Education (CHE) which means that all the participating PHEI's would have these documents. Each participant institution was asked to supply the following documents: 1) Teaching and Learning Strategy, 2) Assessment policy, and 3) Yearbook. The assessment policy outlines the methods, timing and levels of assessment the PHEI will use through the education process. It also details the logistics, security and integrity of the assessment protocols of the PHEI. This is to ensure that all stakeholders are clear as to the how students will be assessed. The yearbook is a document that describes the course content and guidelines of being a student at the institution. It holds a variety of information about the key rules and regulations of the institution, facilities, and subjects of offered by the PHEI. The teaching and learning strategy is a document that spells out the goals, methods, and preferred educational philosophies of the PHEI. It explains the curriculum, pedagogical, and assessment decisions made by the PHEI that govern the educational process. It was this document that really offered the most insight into the competencies the PHEI valued in their students. In addition, the PHEIs were asked for any other document that speaks to the type of graduate they are looking to produce. E.g. marketing material, student portal, course break down. A key point to note here is that while there are 5 separate, participant PHEIs, 3 of them were owned by the same parent company which resulted in one teaching and learning strategy and policy document that was common to 3 of the PHEIs. While their marketing and course breakdown were obviously different to each institution, the core competencies which for the principles of the institutions' strategies all stemmed from one teaching and learning strategy document and one

common prospectus. Table 4.1 below indicates the documents for each PHEI used in the document analysis.

Table 4. 1 Document Analysis across PHEI Institutions

PHEI A	PHEI B	PHEI C	PHEI D	PHEI E
Teaching and learning policy	Teaching and learning policy	Teaching and learning policy	Teaching and learning policy	Teaching and learning policy
Assessment policy	Student orientation guide	Prospectus 2019	Prospectus 2019	Prospectus 2019
Yearbook				

As discussed in Chapter 2, IC_w was argued to be constituted of functionings from 3 different aspects, namely, cognitive processing, emotions, and personal/professional traits. The personal/professional traits aspect covers those functionings which are valued and developed by South African PHEIs. This provides a contextual aspect to IC_w. When analysing the documents, all the competencies, or implied competencies, found were categorised into these initial categories. However, in order to not be limited by my search criteria I decided to broaden the aspects into 5 categories:

1. Cognitive
2. Emotional
3. Professional
4. Personal
5. Other – a competency that does not fit the previous 4 descriptions or perhaps fits in 2 or more and requires further discussion

While successful intelligence has a strong link to the concept of IC_w, in order to avoid limiting the research, the aspect was broadened to involve any cognitive, or cognition related competencies. Thus, the cognitive category is any competency regarding the intellectual capacity and ability of the student to utilise knowledge. The same process was taken for the Emotions aspect. The Emotional category included any competencies regarding the emotional development and emotional management of the student.

Originally there was only one other category which was personal/professional traits which was the home of any and all competencies related to the successful development of one's career such as profession specific content, skills, and desired personality traits. However, after the first page of the first Teaching and Learning Policy document, I came upon a number of competencies that were not directly covered by professional or work contexts such as creativity, responsibility and community conscious. Thus, the Personal/Professional traits aspect was separated into 2 categories of competency. The first was Professional competencies which were any and all competencies regarding their ability to succeed in their desired professional career or industry. The second was Personal competencies which included any and all competencies regarding the development of personality and character. This separation allowed for a broader variety of competencies to be captured while maintaining a clear distinction.

About halfway through the first review of documents, it became apparent that there were some competencies which did not directly fit under each of the initial 4 categories. For example, when the competencies of community engagement and use of language were happened upon, it did not seem immediately apparent where to categorise them, and so another category of competencies titled "Other" was included in the analysis to capture competencies that did not immediately and obviously sit within one of the 4 existing categories.

The findings were quite varied with a large variety of competencies mentioned in the documents. Interestingly in both PHEI A and B's teaching and learning policies there were more personal competencies referred to than any other category (See Table 4.2 and 4.3). The teaching and learning policy that was used for PHEIs C, D, and E prioritized cognitive competencies but there was no significant difference between the cognitive, professional and personal competency categories. What was obvious was that within all the documents reviewed, emotional competencies were mentioned the least by a significant margin. The tables below show the findings from each document reviewed.

Table 4. 2 Document Analysis from PHEI A

Personal	**Professional**	**Emotional**	**Cognitive**	**Other**
Teaching and Learning Strategy				
Respect (p1)	Responsibility (p1)	Caring (p5)	Problem Solving (p2)	

Self-discipline (p1)	Supervision (p1)		Retain Knowledge (p2)	
Use of personal resources (p2)	Perform under pressure (p1)		Apply Knowledge (p2)	
Entrepreneurship (p2)	Communication Skills (prof) (p1)		Reflect on Knowledge (p2)	
Work ethic (p3)	Commercial skill set (p1)		Relate theory to “real world” (p5)	
Energy level	Service – oriented Leadership (p5)		Engaged active learning (p6)	
Outgoing Personality (p3)	Practical Competence (p5)			
Communication Skills (peers) (p3)				
Languages (p3)				
Friendly (p5)				
Positive (p5)				
Managerial Confidence (p5)				
Team player (p5)				
Reliability (p6)				
Timeliness (p6)				
Personal presentation (p6)				
Self-reliant (p6)				

Yearbook				
Foreign Languages (p4)	Presentation skills (p25) (p.43)			
	Communication (prof) (p12) (p42)			
	Keeping to deadlines (p44)			
	Practical Competence (p9)			
	Computer competency (p7)			
Assessment policy - Exit Level & Critical Cross Field Outcomes: Diploma Hospitality Management				
Effective Time Management (p2-3)	Communication (Prof) (p2)		Critically evaluate information (p2) (p10)	
Taking Reponsibility (p2)			Collect and organise data (p2)	
Language (p2)			Critical decision making (p10)	

Table 4. 3 Document Analysis of PHEI B

Personal	Professional	Emotional	Cognitive	Other
Teaching and Learning Policy				
Creativity (p6)	Commercial Savvy (p6)		Connect Facts, ideas and skills (p7)	
Life-long learning (p7)	Specific Jargon / vocabulary (p8)		Identify and solve problems (p7)	
Positive relationships (p8)	Use of internet and online resources (p9)		Apply learning in multiple contexts (p7)	
Maturity (p8)				
Responsibility of own actions (p8)				
Values (p12)				
Attitude (p12)				
Student Orientation Guide 2018				
Hard working (p5)	Creativity (p6)	Having a professional attitude (p38)	Reflexive thinking	Common Ethics (p8)
Motivated (p5)	Dedicated (p6)		Forecasting Analysis (p18)	

Academic Responsible (p9)	Commercial Savvy (p6)		Compare and apply solutions (p18)	
Community conscious (p14	Attendance (p9)		Linking historical data to modern influence (p18)	
Strives for excellence (p26)	Punctuality (p9)		Apply knowledge and skills in different contexts (p18)	
	Meet deadlines (p9)		Link global and local concepts within the industry (p18)	
	Respect for the workplace environment (p9)			
	Operations Management (p18)			
	Entrepreneurial spirit (p18)			
	Making good career decisions (p38)			

Table 4. 4 Document Analysis of PHEI C, D, and E

Personal	Professional	Emotional	Cognitive	Other
Prospectus 2019				
To produce citizens who contribute to society and the economy (p6)				
Teaching and Learning Strategy				
Contribute to development of economy and society (p.6)	Work-ready (p.6)	Overcoming obstacles (p.10)	Critical and creative thinkers (p.6)	Social awareness (p.10)
Take Responsibility for own development (p.7)	Need to source, asses and organise content (p.8)	Ethics (p.12)	Reflective practice (p.6)	Community engagement (p.10)
Being a responsible citizen (p.10)	Communication and presentation skills (p.12) (p.18)	Conservation literacy Teamwork (p.19)	Life-long learning (p.9)	Cultivate curiosity (p.16)
Decision making (p.13)	Goal directed use of technology (p.12)	Social justice (p.19)	Mastery of knowledge (p.11)	
Communication (p.14)	Collaboration (p.14) (p.18)	Ethical and civic literacy	Analytical thinking (p.12) (p.18)	

Personal Expression (p.17)	ICT literacy (p.17)	Humanitarianism (p.19)	Problem solving (p.12) (p.18)	
Self-Direction (p.17)	Planning (p.17)	Multi-culturalism (p.19)	Critical reflection (p.14)	
Perseverance (p.17)	Research skills and practices (p.18)		Intellectual integrity (p.14)	
Self-discipline (p.17)	Scientific literacy (p.18)		Innovation (p.17)	
Initiative (p.17)	Public speaking (p.18)		Imagination (p.17)	
Adaptability (p.17)	Entrepreneurialism (p.18)		Design thinking (p.18)	
Leadership (p.18)	Financial and economic literacy (p.18)		Reasoning (p.18)	
	Teamwork (p.18)		Synthesising information (p.18)	
			Interpretation of oral and written communication (p.18)	

The competencies that fell into the “Other” category were those who could be linked in multiple categories. An example of this was “Cultivating Curiosity.” Curiosity seems most likely a personal

aspect, however cultivating it could be both a professional trait and a cognitive one. So too the examples of ethics and community awareness.

4.3 Interview findings

With the findings and competencies gathered from the document analysis and review of literature, the semi-structured interviews were then conducted with 9 PHEI representatives from each of the 5 participant PHEIs. Initially there were 10 participants from the PHEIs however, one participant originally accepted but then later declined due to medical reasons. The representatives were asked a series of questions broken into 3 sections. The first section was about their educational background and qualifications – see table 4.5 below. The second was about the educational perspectives of the interviewee and the institution, while the third asked them directly about what competencies they would prefer to see in their students. Again, the participants knowledge of IC_w and CA were not a required, and in fact could have negatively affected the data collection process if it was. By asking the PHEI representatives to explain and give detailed insight into valued competencies, something they are far more familiar with, the data is enriched and more accurate. The study utilised a thematic analysis approach described by Braun & Clarke (2006), whereby six steps to analysing qualitative data as explained in Chapter 3 are followed. In order to clearly track quotations taken from the interviews, each response of each interview was given an Interview Transcript Number (ITN). For example, a quote taken from interview 6 will have a corresponding ITN that links to the same number in the interview transcript. There is an example of a transcript with the ITN numbers in Appendix 2.

4.3.1 Section 1: Professional details of the interviewees.

This section was to ensure that the participants had enough experience within PHEI education so that their input had increased validity. The interview participants had a wide range of experience and expertise across the 5 participant PHEIs. All but 2 had postgraduate qualifications. The years of experience of the participants ranged from 6 to 25 years in higher education, even though only 3 participants had education specific qualifications. Only 2 of the participants did not currently conduct lectures. Table 4.5 shows the details of the participants' professional backgrounds.

Table 4. 5 Professional backgrounds of the 9 participant representatives.

Interview	Position	Highest Qualification	NQF level of highest qual.	Education specific qualification	Years Exp	Goal to be in Higher education
1	Head of Academic Programmes	Masters in Fashion	9	No	12	Not really, but idea came during studies.
2	CEO and Head of regulatory compliance	1 year Diploma in Fashion & 2 year Diploma in Interior Design	6	No	16	Not at all. Opened a business.
3	Vice Principle Academics	BEd Honours & Honours in Internal auditing	8	Yes	9	No. Was a tutor in accounts and then went from there.
4	Lecturer and 2nd year coordinator	BEd Honours & PGCE	8	Yes	13	No. Interested through tutoring
5	Head of IT academics	MSC in leadership and IT	9	No	6	No. Came after children
6	Vice Principle Academic	PHd in Public Administration	10	No	6	Not really but always loved academia
7	Academic Co-Navigator	Mtech Photgraphy	9	Yes – PGDip in Tertiary Education	14	No. Wanted to be a photographer
8	Principal	Diploma in Hoispitality Management (Switzerland)	6	No	24	No. Hotel management but an opportunity arose.
9	Director	MBA	9	No	25	No. Hotel Manager and then was put in charge of training.

The really interesting finding, albeit not directly linked with the study, was that none of the participants had started out with the intention to get into the education field. All of them had started

on a path to a different profession and only entered into the higher education domain after completion of an undergraduate qualification and working in a different field.

4.3.2 Section 2: Educational Perspectives

This section of the interview focused on ascertaining the educational perspectives of the participant PHEI representatives. These were education-based questions that looked to reveal perspectives of the interviewees, as well as provide an introductory, broad-based discussion of competencies to get the participant into thinking about competencies they really valued. The interview itself was based on five broad topics with main questions being prepared for before the interview, but also with the flexibility to follow up with clarifying questions, or questions looking for deeper insight into what was said. The five broad topics were: student preparedness for tertiary education, key competencies that are lacking in students, warning signs for poor performance or struggles, developing competencies within the current PHEI structures, and the ethos of the institution in the development of such lacking competencies. The findings within each of these categories is detailed in this section.

1. ***Student Preparedness***

On the question of student preparedness for higher education, there was some consensus across all 9 interviews that, as a generality, secondary school students entering tertiary education were not well prepared. Three of the interviewees discussed the existence of an articulation gap between secondary and tertiary education. The Council on Higher Education defines the articulation gap as

> *"the mismatch or discontinuity between the exit level of secondary education and the entry level of higher education."* (Council on Higher Education, 2013, p. 60)

Other participants discussed the concept of a gap in 4 main areas: Technological, Independence, Expectations and Academic.

In terms of a technological gap, Interviewee 7 discussed how students are required in higher education to be computer literate and able to work with digital communication such as emails, work-based software and accessing online content and yet quoted that 40% of South Africans do not have internet. This obviously presents an enormous challenge to a large percentage of new students who are unfamiliar with the digital environment. Amnesty International (2020) published a report on the state of South African education which discusses just how important computer literacy and digital access is to quality education.

> *"Too many schools suffer from poor infrastructure compromising the quality of education available for learners. These include poorly maintained and unsafe buildings… and the lack of essential facilities such as a library, computer facilities and information technology."* (Amnesty International, 2020, p. 107)

The second gap area was that of independence where the students struggled to manage their own lives effectively. I.e. the concept of being responsible for their own learning, education, time and effort.

> *"You know the environment is so different from school and there is far less, umm, not that we don't support them or that there is no structures in place for them, but the structure is very different and so I really think they experience a major leap in terms of how they now have to start looking after themselves. And really for a lot of students it becomes an issue for them, where they now need to look after their own studies and be responsible for that." (Interview 1, ITN 14)*

As explained in interview 1, higher education requires more input and ownership from students than secondary schooling where there are increased levels of structure and instructions and so students entering tertiary education struggle with the increased independence required of them by the higher education institutions. This is displayed through a lack of competencies such as self-discipline:

> *"So, students are not equipped for tertiary education in terms of being self-sustaining, self-sufficient, self-motivating and all of those kinds of things." (Interview 7, ITN 16)*

Another example of the gap in independence was discussed in how new students to higher education had higher requirements for information, direction and instructions.

> *"I think they are coming in with a perspective that tertiary education is very much at the level of their secondary education. Everything is, as I feel it, spoon-fed to them during their secondary education, during their high school years. I am not sure if it is made easier for them to pass matric because schools and such want to have good matric results, and good matric rates and pass rates, but I really think lots of the youngsters are not aware that whatever industry you are going to go into … there is hard work required." (Interview 8, ITN 17)*

The concept of "spoon-fed" education is a term used to describe short-term, superficial memorization in order to pass or do well at tests. Dehler & Welsh (2014) discussed that when spoon-feeding is utilised:

> *"Textbook knowledge is trivialized and commoditized, not of practical use—now treated merely as costs to be minimized through rentals and return-value in the used book markets."* (Dehler & Welsh, 2014, p. 877)

In other words, students learn to do what is required to achieve a mark, but do not connect the information with their beliefs, values and pre-existing knowledge. Spoon-feeding places the learning process at the educator's feet which results in students requiring extra attention, structure and effort in order to get them to achieve a particular level of performance. In this instance the interviewee was discussing how giving students all the knowledge, methods and concepts required to pass a subject takes responsibility away from the student, which in turn decreases the effort required by the student to achieve a minimum result. This then is problematic for the student when facing the greater levels of independence expected in tertiary education.

> *"I also… find it is a generation that wants to be given everything. So they are willing to ask questions, but they want help, they want assistance, they want guidance non-stop to get them through and there's always a resistance to: "you need to figure this out for yourself. Then come to me and I will guide you." … I guess the biggest lesson in life is learning to be self-sufficient, and problem solve and to find a way to reach the outcome you want." (Interview 2, ITN 24)*

This then takes us to the third gap that was raised through the interviews, which was that of expectations. These expectations referred not only to how different higher education functions to secondary schooling but also expectations of the industry they are heading into.

> *"So, I think, that, so… what the expectations are at school and into matric compared to the expectations in tertiary education, they are not prepared. So, it is a massive difference when they move into tertiary institutions and expectations and achievements they need to meet." (Interview 2, ITN 17)*

> "*I think we have more and more students coming into tertiary education, at our institution and I am sure other institutions as well, they have been given information during their times at high schools and career expos and so on which not necessarily reflects what happens in the industry." (Interview 8, ITN 16)*

A number of the interviewees discussed how tertiary education looked to prepare students for the real world of work and so have structured the institution on industry principles and requirements. Secondary students, while displaying and interest in subject specific content, struggled to come to terms with industry requirements which can be as simple as the number of hours that students expect to work.

> *"… you are not going to get away with working 3 or 4 hour a day. That's not a work day. So we are not preparing them properly I think, for the step from high school into tertiary education." (Interview 8, ITN 17)*

The final gap that was indicated by the interviewees was an academic one. This is in particular reference to academic results from students in the higher education institutions.

> *"I mean most of these students especially the type of students we take at this college, for me are the students that have struggled through 12 years of schooling." (Interview 3, ITN 16)*

Academic results from secondary school are used as the benchmark for entry into higher education. The Department of Education of South Africa has set a National Senior Certificate (NSC) in the final year of secondary schooling (grade 12) and the results from the 7 subjects are then used to allow application to the various tertiary programmes in the country and abroad. The academic gap that the interviewees referred to are the levels of performance in the NSC results and those required in tertiary education.

Another aspect to this is that getting into certain qualifications requires some similar, cognate subjects to be taken in grade 12, but this does not seem to be the case.

> *"… the qualification that I am administering, that I am coordinating, the BBAs, it's a commercial programme. It's a commercial course but now you have students that don't have the background of accounting, background of economics for example, but they are taken by the institution from the mere fact they got a university or a degree entrance on their grade 12 results." (Interview 4, ITN 20)*

Thus, the academic gap is not only about students struggling to achieve passing results, but also a lack in the fundamental content that is required in order to extend into higher education. However, while the experience of these 4 gaps by the interviewees highlight challenges of higher education, 2 of the interviewees made the point that it would be unfair to expect students entering

higher education for the first time to understand the requirements, expectations and differences immediately, and that it was the responsibility of the higher education institution to educate and support the new students to acclimatize to the new expectations.

> *"So, it really takes a lot of orientation with them, maybe even a little bit of hand holding for the first 6 months or so to make sure they know how to set their own pace. They are responsible for their own learning." (Interview 7, ITN 16)*

> *"But I mean the role of tertiary education pretty much is to prepare them. So, you can't expect them to be ready. They are coming here to get ready for tertiary education. They are coming here to get ready for tertiary education… There's a gap between the schooling and the tertiary education. So, I think as an educator it would be an assumption to assume that they are going to be ready for tertiary education. It's a new environment." (Interview 6, ITN 22)*

While this argument seems sound, it did raise an important question: When a student finishes a particular level of education does that mean they are ready for the next level? Interviewee 6 made it clear that students entering higher education for the first time cannot be expected to be ready or prepared for higher education because it is a new environment, however when taking this argument a bit further, this seems to indicate a perspective of education that values demonstrating competence at a particular level, rather than a perspective of education that values being ready for the next step. In terms of the articulation gap between secondary and tertiary education it would be problematic and exacerbating to have secondary educators focus solely on the achieving of a grade 12 level if the next academic step had very different and more complex expectations and academic requirements. The CHE (2013) recognises this argument when it states:

> *"If student underpreparedness is seen as a primary cause of poor performance in higher education, the key pragmatic question for assessing the prospects for improvement is: To what extent will the secondary education sector be able to produce well-prepared candidates for higher education in sufficient numbers to enable higher education to function successfully within its current curriculum structures and educational approaches?"* (Council on Higher Education, 2013, p. 62)

This quote emphasises the importance of focusing the development of learners to be adequately prepared for the next step in their educational progress. If educators are perpetuating a

perspective that doing just enough to pass the current level is required, or even desired, then the articulation gap will remain in place. This will be discussed more in chapter 5.

2. Key competencies that are lacking

From the interviews there were two competencies identified as lacking that were almost unanimous across the 9 interviews and those competencies were reading and writing. As all the participant institutions utilised English as the language of instruction, this referred to reading and writing in English. When asked to elaborate, reading was really about engaging with content from a text-based source, whether it be textbooks, journals, online articles or even email communication from the institution. The writing aspect represented the ability of students to write academic assignments or even express themselves effectively in written communication.

Stemming from these two baseline competencies, the concept of Academic Literacy was raised quite often. Academic Literacy, from the interview discussions, referred to the student's ability to engage critically with academic content, to analyse and utilise information in an academic environment as well as understand and apply sound referencing principles to their work. The CHE define academic literacy as:

> *"An academic literacy… involves the ability to decode and encode print in sophisticated ways but also the willingness to engage with texts in ways sanctioned and legitimated by the disciplines. Reading and writing in the disciplines can therefore be understood as involving a set of sanctioned and legitimated practices."* (Council on Higher Education, 2013, p. 245)

Some other fairly common competencies mentioned were time management, numeracy, and the *"soft skills of being a student"* such as engaging in class, asking questions, and expressing themselves. In terms of time management, the interviewees suggest that students lack the ability to manage the various new responsibilities in their lives and the decisions that come with it. They go on to say that being able to prioritise tasks; to deal with multiple requirements simultaneously without depleting the quality of work or performance is quite a challenge for students.

> *"They have no Time management skills … It is having to meet expectations. So, you have to hand in an assignment. You have to hand it in… at a certain time, and there's multiple assignments in different courses, so it's managing your time." (Interview 2, ITN 18)*

> *"But time management is one that lacks a lot… Student comes to the campus. You are dropped on time actually. Somewhere, somehow, its ok to be late for a class. Or its ok to*

leave early. Somewhere somehow you have 5 classes and an assignment on the same day. The timing of you dividing your time to be in the class and also be able to do the assignment is not there." (Interview 6, ITN 28-29)

Numeracy – or the ability to work with and understand numbers – is another challenge to students, but not just in their actual understanding of numbers. There also seems to be a lack of confidence that manifests itself when faced with numbers.

"I think that, my major torment is the level of numeracy from South African students. I think that for whatever reason, the level of fear expressed or exhibited by our students when it comes to relatively simple concepts and percentages is palpable. And at some stage they have been allowed to believe that they can't do numbers, and they have, over years, reinforced that lack of belief, lack of self-belief to the extent where they will avoid numbers wherever they can." (Interview 9, ITN 13)

Not only does the quote refer to students not understanding how to work with numbers, but also talks about the lack of belief students have in their own ability. This not only appears in the numeracy field but in the general interactions with tertiary education. The lack of self-belief, or self-esteem can severely limit a student's engagement with their own development and learning. This impact that soft skills has on learning and educational performance is recognised by the CHE (2013) when they quote:

"In South Africa, Academic Development experience has indicated that the benefits of well-designed educational interventions can be neutralised by lack of motivation, anxiety about personal or financial circumstances, or alienation from the institution... The relationship between affective factors and academic performance is likely to be iterative, however, so the other side of the coin is that students' confidence, motivation, and general wellness may be compromised by inability to cope with the educational process they find themselves in." (Council on Higher Education, 2013, p. 56)

The participants too supported the impact soft skills had on the learning process.

"I think that there's a high number of students who don't, who are able to express themselves as clearly and as logically as they might be expected to at that age. Quite a lot of shy students. Naïve students who hold views that although they might be quite acceptable are not necessarily well thought out. So, these students because of this unsureness or unwillingness to come forward, or sensitivity to criticism don't really get the

best out of the programme that they might do, because they withdraw from it." (Interview 9, ITN 14)

"… also I think that there is a combination that is very important that has been neglected probably by the high school foundation of education is the social skills to cope with a tertiary environment. I think it's one skill that we don't mention but it is very paramount." (Interview 3, ITN 19)

These quotes are referring to the "soft skills" of education. Those skills that are not directly related to content and testing, but rather tested every day when dealing with the various challenges of higher education. These are the competencies that often have a significant impact on the success of students but are not covered by the content driven curriculum and it is in these "soft skills" of education that we can start to see competencies that can help construct our concept of IC_w.

3. Warning Signs

This section of the interview asked the participants what behaviours they experienced with the students that would indicate to them that the student was struggling or would struggle with the requirements of the qualification. Across the board there were 2 main warning signs: absenteeism and lack of engagement.

Throughout the discussion of absenteeism with the individual participants, it was made clear that absenteeism indicated that there was a problem.

"Attendance is always the first thing we look at. You first day of school, orientation week, the student isn't there so what is the problem?" (Interview 1, ITN 22)

"For us I think the emphasis has been on attendance. So, we observe the attendance of the classes in order to pick up like also early warning signs to pick up are these group of students going to make it." (Interview 3, ITN 34)

This problem could be down to socio-economic factors such as money for transport, but the more common response from the participants was that absenteeism indicated an unwillingness to participate in the lessons and classroom environment. To the participants, absenteeism was a strong first indicator that a student was struggling in the course, perhaps not just academically, but on an emotional level as well. Coetzee and Venter (2016) discussed the concept of absenteeism as an umbrella term that is used to describe a number of behaviours or instances where learners are not attending lessons. They go on to discuss the variety of types of

absenteeism and how they differ. An example is difference between truancy and school refusal. As explained by Coetzee & Venter (2016), truancy is being absent without a legitimate reason and as a result, gets linked with the idea that the truant students are misbehaving and require some sort of punishment. School refusal on the other hand is where students have increased anxiety about attending school and convince their parents/guardians to let them stay at home. While the one type of absence is an unwillingness to engage in school for social reasons, the other is an unwillingness to engage in school for emotional reasons. In either example, the participants recognise that absence from class usually indicates some sort of unwillingness or issue.

> *"Absenteeism is I think one of the first signs of panic on their part. But gosh this is what I thought and I don't know if I can make it today because I'm in a confused and frightening place so I think I will take the day off." (Interview 9, ITN 17)*

Having to deal with confidence issues whether they stem from interest in the subject matter, trouble fitting in with peers or battling with more complex concepts, seems to affect students' willingness to attend lessons. This link between confidence and behaviour links back to the concept of self-efficacy proposed by Bandura (2006) – as discussed in chapter 2 – whereby a person's perceived ability to complete a task or achieve a goal has a significant impact on their resultant behaviour. From an institutional perspective, absenteeism is measure of performance that is recorded and either used as a formal requirement for passing the course or as a discussion point in performance feedback with both students and stakeholders. The other behaviours that surround absenteeism were grouped together in the second main warning sign given by the participants and that was a lack of engagement.

While absenteeism means that the student does not attend lessons, a lack of engagement can occur while the student is physically present in the lecture. A student can demonstrate a lack of engagement in a number of behaviours such as not asking or responding to questions, not interacting with the lecturer or the other classmates, or not participating in group activities. All of these indicate a withdrawal of the student which, for our participants, indicates that the student will struggle in the course.

From the participants' responses when discussing engagement, there were three types of engagement that they referred to. The first was cognitive engagement which referred to the students not being able to understand the academic content of the course which resulted in a disengagement.

'So, some of the warning signs is when you try to engage a student and in terms of getting to see if they are capable, in terms of analysing a situation… I work a lot with case studies, and that inability to actually to connect the dots and find a solution within a particular perspective or within a particular scenario and not being able to understand fully what is happening in one module how it ties up with all the other modules." (Interview 5, ITN 50)

Students would withdraw from engaging with academic content that was too difficult or complex. Another type of engagement was then talked about a little later in the same interview when the focus shifted to a social disengagement.

"… because I put them a lot in groups and you can sort of identify this person just sitting there not contributing or they, they are just aloof. They don't seem interested. That is, even if you have the intellectual capability, if you are not being able to actually find your space in a team it is going to be a challenge." (Interview 5, ITN 53)

For participant 5 there is a clear distinction between cognitive disengaging behaviour and social disengaging behaviour, both of which were warning signs that a student would struggle with course. Social disengaging behaviour was also discussed in interview 9, but seemed to go a little deeper into understanding it.

"Students that get isolated from the group don't seem to have social skills or confidence to open themselves up to new people. A bit wary of other people. A little bit backward in coming forward." (Interview 9, ITN 17)

This then links a lack of social engagement with the third category of engagement which is emotional engagement. Students who struggle with emotional issues such as self-confidence, self-motivation and courage to take a risk display behaviour that indicate a disengagement from the course. This often takes the form of being too quiet, not asking questions, or disregarding offers for help or assistance.

"And often that escapes us is that really quiet student that are not asking questions, not being involved. You go to them and they are: I'm fine." (Interview 2, ITN 31)

"Unwillingness to take a risk and make an answer in class. I suppose fear of being wrong that they don't want to answer because if they get it wrong, they will feel bad about themselves. Or an unwillingness and this is even more important, to ask questions.

Because I do believe that there is a widely held idea that if you ask questions you must be daft." (Interview 9, ITN 17)

Reasons for this are numerous ranging from personality to cultural upbringing, but the result of any kind of disengagement seems to be rather similar.

"So, when they are coming here, they don't ask questions because it is such a cultural, in depth thing, that they are not used to being able to ask the question or give an opinion. And that is part of learning." (Interview 2, ITN 35)

While there were 2 main categories of warning signs given in the interviews – absenteeism and lack of engagement – some other responses were given such as not handing in assignments on time and distracting behaviour in class, but a more interesting response was based on the academic results. 3 of the 9 interviewees when asked about what warning signs they experience with students raised the issue of academic results. The reason this is interesting is that while the majority of participants thought of behavioural interactions, these 3 participants aligned behavioural warning signs with academic results. While there may be a strong argument for why there is nothing essentially wrong with this link, it does indicate how an educator's perspective of students can be primarily based on academic results. In looking more into this finding, this perspective was found to be prevalent throughout the 3 interviews, in the way they responded to the questions. When comparing them to the rest it became clear that there was a dichotomy in language, style and focus of the participant responses which I have categorised into: Educational Process and Educational Substance discourse.

The 3 interviewees that displayed Educational Process discourse utilised terms, vocabulary and phrases that stemmed from the business or systematic side of education. They talked about procedures, interventions, statistics and pass rates. They used abbreviations and acronyms of educational buzz words to explain their views, opinions, and responses. This was in stark contrast to the 6 other participants and how they responded to the questions. There was a lot more focus on students and getting to know how learning took place in the institution. They were far more interested by how students responded to new ideas and teaching methods. They talked with the use of examples of individual students rather than broad statistics or pass rates.

To illustrate I use the example of difference in discourse used between interview 3 and 7 when asked a question about if they believed that students were suitably equipped and prepared for tertiary education. Here are some examples from interview 3:

"No. They are not. I mean most of these students especially the type of students we take at this college, for me are the students that have struggled through 12 years of schooling. So, we are not taking top of the crop students. Those go into public institutions… So, we become their last choice simply because we are not academically strong. Our students on average have a high school pass mark of 32(%) so they are not in my opinion ready for higher, tertiary education and it is mainly based on the fact that have not done well with their school results." (Interview 3, ITN 16)

"And also, just to put some context on it, 60% of our student population are on the Higher Certificate because they do not qualify to do degrees and the reason they do not qualify is the requirements." (Interview 3, ITN 17)

These are both in response to the one question. As can be seen there are strong links to process and procedure of education in the response. Taking a macro perspective of the question by providing percentages and talking about student populations in general. In specifically addressing the question of preparedness, the response focusses primarily on school results, pass rates and requirements. All very administrative or process orientated wording.

In contrast, here is the response to the same question from interview 7.

"So, students are not equipped for tertiary education in terms of being self-sustaining, self-sufficient, self-motivating and all of those kinds of things. So, it really takes a lot of orientation with them, maybe even a little bit of hand holding for the first 6 months or so to make sure they know how to set their own pace. They are responsible for their own learning." (Interview 7, ITN 16)

"But also, many of our students are afraid of technology, so going from having everything given to you, to having to access everything for yourself, and making sure that you are up to date on your content and information and you've done the required training… I find that there is a gap there." (Interview 7, ITN 16)

Here the focus is more on the experience of the student and how the student feels about the tertiary education. In this response, student preparedness is related to the individual student and how they navigate engaging with the institute itself and their own learning. A far more substantive type of discourse.

Another example of the use of different discourses was between Interview 1 and interview 6. This time the question was about what some of the warning signs were that students display that made the interviewees think they were going to struggle at the institution.

> *"When they miss more than 2 classes. Miss more than 2 classes, the warning signs are there. And then in the first assessment that you give, you can tell there's a problem here. And this is based on the grading they have." (Interview 6, ITN 33-34)*

> *"Attendance. That first assessment and that first formative assessment and so you monitor it because one can miss class because there are issues at home, ok. Then they come to the first task, get to the first formative so you pick up those buttons and then you tell them, there is a problem." (Interview 6, ITN 36)*

Again, the response to the question takes a process approach by focusing on systems of grading and attendance. There is almost a detached feeling about the response in that the warning signs that indicate problems in students are covered by the systems of taking monitoring attendance and the systems of assessment and grading.

In contrast, here is the response to the same question from Interview 1.

> *"So, one of them would be the first few days of class. Attendance is always the first thing we look at. You first day of school, orientation week, the student isn't there so what is the problem? They have signed up. If this is a course that is based in someone's passion – you don't study fashion design just because you are looking for a qualification. It is one of those that is really very niche. So, we don't usually get the students in an intake environment – like a BA arts or something where they just need a qualification. You know, so the students that sign up here are students that really want to be involved in clothing design and in that industry, so for someone not to arrive for first day orientation or first day of lectures that's my first warning bell. You know, we are on the phone straight away saying "what is going on?" (Interview 1, ITN 22)*

> *"What are some of the other things? Behavioural issues that we look at in first year are: Is there a bit of disruption? Are they too busy chatting with their friend to really be engaging with the class environment?" (Interview 1, ITN 22)*

> *"We use some little tests and quizzes and feedback tools on our student portal. To really help us in the beginning as well. So, after orientation, … all the students have to finish an*

orientation feedback form. And part of that is getting feedback on the process of orientation. What did they learn from it? Was it fun for them? So, we can improve orientation next year round. But additionally, and in a different way, we look at those feedback forms to really assess if there are going to be any problems. So, we kind of use those feedback forms, that survey, as a way to assess any problems straight away." (Interview 1, ITN 22)

The response to the question of warning signs in students takes a much more substantive approach in that the focus is on how the student is engaging with the institution, the people around them as well as the content itself. While both indicate the importance of attendance, the response in interview 1 goes further address why a student may not be attending and indicates that there is a link to the interest of the student to the qualification more than just a means to a qualification.

This difference did not seem to stem from any obvious level or type of educational background. Interviewees 1 and 6 had no education specific qualifications while both 3 and 7 did. The lowest NQF level qualification was for Interviewee 3 at level 8, while the highest was Interviewee 6 at level 10. So, no real correlation with qualifications and discourse type. Nor were there any clear indicators from their positions in the institutions. All 4 of the interviewees – while having slightly different titles – were in charge of organising lecturers and content within their respective qualifications. Whatever the reason, it was interesting to see how the two perspectives were represented and how for some educators the systematic understanding of education seems to influence their understanding of learning and development, while for others a more humanistic philosophy seems to be the main driver. This study has positioned IC_w as a critical functioning for work within the framework of CA, a humanist paradigm of development. Due to this, it stands to reason that, with the relevant research and findings, IC_w would be better facilitated and developed within students through an Educational Substance discourse than through an Educational Process discourse. This is discussed in more detail in Chapter 5.

4. Developing competencies within the institution

With an understanding of some of the lacking competencies seen in the students by the participants, as well as a discussion on some of the main warning signs that would indicate a struggling student, the participants were then asked about what their institutions did – if anything – that looked to address the lacking competencies and/or to develop these competencies. From the responses, I have thematically categorised them into 4 strategies that the institutions utilize.

Restructuring the curriculum

One response to addressing lacking competencies was to restructure the curriculum to try and negate some of the challenges to new students. In interview 1, the participant described how the institution had completely overhauled the scheduling of different modules to try and minimize the amount of new information that students were being bombarded with when beginning their studies.

> *"So what we found was, because the amount of newness was quite overwhelming for the students and they found themselves with a very busy schedule, the feedback was they were overwhelmed. They were struggling to keep up with the assessments, which was, you know a lot for them to handle. We looked at what we could change to make their progression smoother and more manageable for them – not to make it easier just to make that clear." (Interview 1, ITN 24)*

The strategy meant that instead of having multiple modules running throughout the year simultaneously, students would focus on one module at a time in concentrated 5-7-week session. All content, assignments and exams would be done in that time and when one was finished, the next module would begin. This was calculated so that the students were still getting the same amount of contact time with the lecturer as before but now the students would not have to deal with multiple content streams at a time. While the institution had only just enacted the new structure the feedback that was being received was very positive from the students. From the 2nd year students who had gone through the previous structure the comparison was very positive.

> *"So for them in second year they are finding it a lot better or easier to manage their time. All of the cohorts have at least half a day off at least somewhere in the week when they don't have scheduled class time – which is new. Last year it wasn't like that. And they are finding that it makes it a lot easier for them to get through their homework and research exercises that they get for their assignments. That they can actually manage that better. So, so far, the feedback has been much more positive." (Interview 1, ITN 25)*

This restructuring went a long way to address one of the major lacking competencies in time management and has thus far been very well received. Another restructuring came in the form of pedagogical approach. Rather than having more traditional lectures in the third year of the programme, the change was made to have less teacher-directed time and more learner-directed time embedded in the curriculum.

"And that's why we have really re-strategized all our courses, and, especially in our third-year diploma, we are giving them this year… time to meet with the lecturer and unassisted time to produce the work. So I am actually removing the lecturer out of the classroom so that they have to work on their own… so they can have a one on one meeting where you are, you bring everything you have planned and organised, with what you are going to do, you can go through it with the lecturer and then you are implementing it." (Interview 2, ITN 36-37)

This intervention looks to move the locus of responsibility of learning and work from the lecturer onto the student, thereby giving the student opportunity to self-manage, self-motivate, and take ownership of their own development.

The third way of restructuring the curriculum that was discussed was the restructuring of the content of the qualifications themselves. A few of the participant institutions took to adding support type content into existing, credit bearing modules, or even adding new credit bearing modules into the qualification. 4 out of the 5 participant PHEIs have included at least one credit bearing support module into their curriculum, the majority have included more. The most common addition has been centred around Academic Literacy with specific regards to academic writing and referencing. Others included computer literacy and business communication. The reason for including it in the qualification with credits attached to it is to highlight its importance to the students.

"…we have introduced in the last three years, 2 modules: Business Communication and Introduction to Academic and Digital Literacy. Those modules were introduced purely in order to enhance or bring in that skill that is not there." (Interview 3, ITN 21)

Supplementary / Extracurricular workshops

The second strategy that arose from the interviews about improving competencies in students was the organising and running of short-term workshops. These were modules that were run either on a weekend, during a week, or over a period of sessions that addressed some of the identified lacking competencies. Such workshop topics included: academic literacy, referencing, time management, study skills, dealing with stress, computer skills and preparation for the work environment. One example even went so far as to address the differences in expectations between students and tertiary education through a workshop during orientation. The purpose of

these workshops is to give the students an opportunity to develop themselves outside of the content of the qualification.

Two different approaches were taken to promote these workshops: one was to make it optional for all students but make compulsory for “at risk” students, while the second was to make it compulsory for all students. From the interviews though, the participants did not really display any real enthusiasm for the success of these workshops. The first concern was about student attendance. They found it very hard to get students to attend workshops that did not fall into the specific curriculum and thus, didn’t count for marks.

> *“The workshops will be there. It will be indicated when you should attend and indicate that it is compulsory, but students never attend those things” (Interview 4, ITN 33)*

> *“Let’s be honest. In higher education if it’s not compulsory it’s not going to be attended. Trust me, because even when its compulsory it’s a struggle to get them there so imagine if it’s not compulsory, why must they attend?” (Interview 6, ITN 55-56)*

Some strategies that came out of the interviews for encouraging attendance for workshops were scheduling it in the middle of the workday and requiring attendance as part of “pass/fail” mark that was required by the qualification. The scheduling part was demonstrated in 2 of the institutions where they had a designated hour between 12h00 and 13h00 each day or once or twice a week in order for the students to attend a specific workshop. This really helped encourage attendance as students had afternoon lessons and so were forced to be around the institution during that time. In terms of designating a pass/fail mark to the individual workshops one strategy was to allocate it as part of a Work-Integrated Learning (WIL) mark that was incorporated into the qualification’s curriculum. In one instance, an institute outsourced the workshops to a specialised organisation to come in and run the workshops for the students. The students then needed to attend the workshops in order to get a pass mark.

Another issue was the effectiveness of the workshops. While all the participants agreed that having the workshops was an important learning opportunity for students, there was some doubt that it was not being an effective intervention.

> *“I think we can do more as an institution to address them, but currently yes they are there, but…. Not quite as effective…” (Interview 4, ITN 34-35)*

Individual Relationship building

A third method of developing lacking competencies that was raised by the participants was the notion of building relationships with the students outside of the classroom environment. From a teacher's perspective, building a relationship outside the classroom allowed for closer, more effective engagement. This was specifically seen within the smaller of the institutions purely based on the lesser number of students.

> *"And it's the benefit of a smaller institution like ours that you do know the students personally, it's not a matter that you know them by number or by name, but you actually learn their personalities their traits their characteristics." (Interview 8, ITN 23)*

> *"I think also being a small school helps. … I think it's a reality of small schools that you can develop a level of contact with your students to a far greater degree, a more personable degree." (Interview 9, ITN 19)*

The ability of educators to be able to get to know their students on a more personal level really helped remove barriers such as anxiety, lack of self-confidence, and withdrawing from engaging. By knowing the student's behavioural traits, educators can work with the student to work through them in a more personal, engaging way. In a recent report on student engagement by Universities South Africa, Professor Francois Strydom (Director of the Centre for Teaching and Learning at the University of the Free State) stated that

> *"quality learning cannot take place outside a healthy pedagogical relationship between students and lecturers."* (Universities South Africa, 2018b, p. 6)

The South African survey of student engagement (SASSE) is conducted by the University of the Free State that looks to understand and improve the way students and educators engage with learning. As the quote above states, great importance is placed on understanding the pedagogical relationship between educators and students due to its role in quality learning (Universities South Africa, 2018b). By having a strong, close and open pedagogical relationship, students are better placed emotionally to engage in learning processes. The educators have the ability to link the student with the content at a deeper, more significant level (Universities South Africa, 2018a). The educators can also notice personal warning signs that something may be wrong in the student's life and aid accordingly. In some instances, from the interviews, this aid came from the educators themselves but in other institutions the presence of a designated person whose responsibility was to help students in this matter was implemented.

> *"The other thing that we also find out is, you will find at risk students, but they are not necessarily at academic risk. They are at socio-economic risk. So what we do is refer them to what we call SRM. SRM is the Student Relations Manager, who is a professional counsellor who is on site. … We refer those students to say like: you know what the reason the student is not performing is not necessarily that they don't get what is happening in class, it is because lately they have been distracted because they lost a father or their parents lost their job so there is an income issue at home." (Interview 3, ITN 39)*

The concept of the student relations manager was seen in other institutions with slight variation. In one case students that were identified as needing aid were encouraged to speak to the counsellor, while at others regular, individual feedback sessions were compulsory for all students albeit not with a professional councillor, but with a staff member who could provide some individual attention. The basic premise of this is to provide a safe place for students to feel more secure about opening up about challenges they may be facing that is hindering their engagement in the institution, thus helping develop those personal competencies that are lacking.

It was also clear in the interviews that the idea of building relationships was not only meaning between teachers and students, but also the students with each other. One participant discussed how having good interaction between students helped with encouraging student engagement. This sentiment is echoed in the findings of Beginning University Survey of Student Engagement (BUSSE) (Universities South Africa, 2018b). The findings explain that students recognize that their learning development involves engagement with not only the institution and lecturers, but with the other students as well.

> *"The BUSSE findings show that entering students tend to perceive their academic journey as a collaboration between their own efforts and those of the institution. Encouragingly, they also show that students from all backgrounds expect to learn through structured collaboration with their peers, signalling a willingness to embrace diversity and hone their teamwork skills – qualities considered highly desirable in the modern workplace."* (Universities South Africa, 2018b, p. 9)

Having positive relationships with peers in an educational setting can take place in the more informal, social, more naturally developed instances, but can also come from more formalised structures. From interview 9, this was emphasised through the work of Student Representative Councils (SRC). Student organised activities, events, workshops and meetings also went a long way to encouraging student engagement.

"I think that when we've got a strong SRC group and a strong leadership group in the senior years, I think they have a very good, but probably unmeasured positive effect on the newer students in that they provide an example or a reference or even just a shoulder to cry on for the younger students. And of course, if they are having a good time it is very difficult for other people, the younger student to think: oh well I'm miserable. Because they think well everybody else is having a good time, I'd better have a good time too." (Interview 9, ITN 18)

Having positive relationships with the students in the class and the institution goes a long way to providing students a secure pathway to development. If students struggle with the idea of opening up to educators or even adults, having peers, colleagues and friends who are willing to provide guidance and support can go a long way for individual development.

"And having half a dozen different characters in key student facing positions, there is an increased chance that each student is going to find person they can confide in and go to, and makes all the difference." (Interview 9, ITN 19)

Work Integrated Learning

This relationship building outside of the classroom is also reinforced through group practical sessions and work-based internships. In some of the qualifications there is an element of Work-Integrated Learning (WIL) that involves students working in groups to achieve a variety of tasks that are specific to the industry they are looking to move in to. WIL, as defined by the Council on Higher Education South Africa, is as follows:

"WIL is used as an umbrella term to describe curricular, pedagogic and assessment practices, across a range of academic disciplines that integrate formal learning and workplace concerns. The integration of theory and practice in student learning can occur through a range of WIL approaches, apart from formal or informal work placements. WIL is primarily intended to enhance student learning, and to this end several innovative curricular, pedagogical and assessment forms have developed in response to concerns about graduateness, employability and civic responsibility; examples include: action-learning, apprenticeships, cooperative education, experiential learning, inquiry learning, inter-professional learning, practicum placements, problem-based learning, project-based learning, scenario learning, service-learning, team-based learning, virtual or simulated

WIL learning, work-based learning, work experience, workplace learning, and so on" (*Work-Integrated Learning: Good Practice Guide*, 2011)

Through challenging real-life problems like dealing with difficult people, resolving conflict and teamwork, students are challenged to develop these competencies directly. While WIL was discussed within the realms of developing relationships, WIL was also discussed on its own as the main area in education where students would develop the non-academic competencies. On speaking about WIL, one participant explained:

> *"…it gives us the opportunity to recreate scenarios and they really get to experience different team work, real world scenarios and they learn a lot about each other, they learn a lot about emotional intelligence through those experiences whether they realize it or not. You know, we are not teaching them a literal section on emotional intelligence, but in those different scenarios they are experiencing those different things that force them to grapple with, you know, not major issues, but things that do come up in those team work scenarios. And they do experience a few like that" (Interview 1, ITN 40)*

It was very prevalent in the interviews that WIL was the section of education for the development of non-curricular or academic competencies. As a result, there were a number of ways in which WIL was integrated into the various qualifications. Some in the guise of group projects dealing with external companies, while others in the form of internships.

> *"I think our internships are very good. The internships are about many things but one of the good factors is we very early on in the programme get students to confront the trials and tribulations of fitting into a work place… But at least with our students in a controlled and progressive way they get to overcome those first day fears through exposure and practice and working in different types of organisations and working in different cultures." (Interview 9, ITN 18)*

> *"They do it in their last year of study. So it's in the module called WIL. So, in that WIL module they will have their other specific integration. But part of it also requires them to engage in workshops like your stress management, time management, community and social engagement. That's what it does." (Interview 3, ITN 59)*

5. Ethos of developing competencies

On the whole, the participants had stated that the staff at their institutions were very aware and consciously promoting the development of competencies in the students. Some institutions were

very driven by developing competencies while others recognised that there were structures in place and trusted that they were working well. However, there were 2 points that were raised to emphasise the challenges of developing an ethos of developing competencies within an organisation. The first was referred to a lack of follow through on policy by the institution.

> *"There's a lacking of that and then I think this goes back to the first part. The first part I indicated of that you find that private institutions are more concerned with profit making. They are there but we find that these policies, ethos are mostly addressed let's say during orientation of new staff. For example, but when you look at whether is there a follow up, implementation, monitoring, there is a lack there." (Interview 4, ITN 40)*

This problematic implementation and monitoring of policy is not an uncommon occurrence in education. Ball, Maguire, Braun and Hoskins (2011) discussed through their research of policy enactment in UK schools that the reality of policy creation, implementation and monitoring is greatly influenced by a number of workplace, humanistic and social issues.

> *"Our data taken as a whole convey a sense of overload and contradiction being held together by fragile structures, more or less convincing narratives and a great deal of raw commitment (of some different sorts and degrees, to students and to schools) and much goodwill."* (Ball et al., 2011, p. 637)

For participant 4 the ethos of developing competencies did not permeate the institution's staff past the initial stages of the year. As there was no follow up or monitoring from the institution, the staff de-prioritised the importance and moved on with other aspects of their lives and jobs. Monitoring the implementation of student development policies was discussed throughout all the interviews with reference to specific means and methods, whereby for participant 4 this was not happening at the institution, which meant a limited ethos of competency development in the staff. This response also seemed to stem from the perspective that the institution in question was more focussed on the business side of education rather than the true, substantive education of the students.

The second issue that hindered the fostering of a good development ethos was from the type of employment of the staff.

> *"But I think with the new model that is in place, we might realize like one focus where it is everyone's responsibility to ensure we support the students. What we have done in the last 3 years, we've been using a model called IC model, Independent Contractor model,*

and over the years we are phasing that out and getting what we call full-time lecturers. Guys who are permanent, who are at the site who are driving or are driven by the institution visions. Because with you independent contractors, what we have actually been experiencing, not all of them though, but majority of them it was that: OK, I only deliver what is in my contract. So, if I have to come here and lecture 4 hours and after 4 hours I need to be elsewhere, I'm there. So, if there is a student that says can I meet with you, can I not do this, can I… previously that was not available until we introduced things like student consultations where we actually pay them to have that consultation with the student." (Interview 3, ITN 49)

Essentially the point here is that staff who are employed full time by the institution are able, or perhaps better placed, to truly invest in the development of their students, while part-time, independent contractors are more focussed on working to the letter of their contractual requirements. However, while this may sound like a good argument, other institutions who also had a high number of independent contractors believed that they did have a strong ethos of developing students. One participant suggested that out of 81 lecturers only 11 were full time, but when asked about if this was a problem with building an ethos of developing students, the answer was quite different.

"We don't battle with it. We have a joke that once you start lecturing here you have drunk the cool-aid. You have joined the cult. We are very fortunate that the kind of person we attract is automatically who we are as a brand. And it fits in with our ethos." (Interview 7, ITN 44)

This response shows that even though staff members may be part-time, they can still be encouraged and motivated to engage in student development.

4.3.3 Section 3: Valued Competencies

Table 4.6 below shows the most commonly referred to competencies that were valued by the interviewees, followed by the number of times they were mentioned across all interviews. There were many other competencies that were mentioned during the interviews and for more details please refer to the Semi-Structured Interview Competency Table document in Appendix 6. The main point of this section of the interview was to find out which of the competencies were most

valued by the participants. Thus, the competencies that had the highest instance in each category were gathered to be the core focus.

Table 4. 6 Most commonly occurring competencies from the semi-structured interviews.

Personal	**Professional**	**Emotional**	**Cognitive**	**Other / Multifaceted**
Participate and engage with the world around you / Citizenship (6)	Academic Literacy (9)	Empathy (3)	Analytical skills (8)	Teamwork: Both professional and personal (10)
Responsibility (6)	Time Management (7)	Maturity (3)	Problem Solving (7)	Personal and Professional Communication (7)
How to carry yourself at work / Deportment (4)	Competence in the specific area of focus in the qualification (4)	Stress Management (2)	Critical thinking / evaluation (5)	Conflict resolution both personally and professionally (3)
Independence (3)	Clear expectations (4)	Deal with criticism (2)	Linking concepts together (5)	
Self-discipline (3)	Presentation skills / Sharing of knowledge (3)	Emotional Intelligence (2)	Reasoning (4)	
Motivated (3)		Appropriate response to various situations (2)		

The table above indicates the competencies that are the most valued by the 9 PHEI representatives. Thus, in the development of a concept of IC_w, these competencies would be most valued. As argued in Chapter 2, IC_w is comprised of 3 aspects namely Emotions, Cognitive Processing, and what was termed “Personal/Professional traits”. The personal/professional traits

aspect represents those competencies that contextualise IC_w to the South African working environment. As explained early in the chapter, this aspect was split into 2 sub-categories in personal traits and professional traits as during the research process it became clear that there were some valued competencies that required this distinction. Another point is to recognise that the "Other/Multifaceted" section of the table was also not initially included during the analysis but arose as certain competencies could be applied to both personal and professional categories. This section really revolved around communication with others which was very much deemed a highly valued competency. This table of most commonly mentioned competencies indicates the competencies that IC_w would seem to be comprised of within the 3 different aspects from the perspective of the PHEI representatives.

4.4 Questionnaire findings

The highly structured questionnaire was designed from the findings from both the document analysis and the semi-structured interviews. The goal was to provide some of the key competencies that arose from the previous findings and review of literature and ask the students of the participant PHEIs to provide insight into which of the competencies were most valued by them. In relation to the Exploratory mixed methodology, the main qualitative research is then supplemented by the quantitative research. The structured questionnaires and subsequent numerical valuations form the quantitative analysis. Input from the students themselves is of vital importance to the establishment of a concept of IC_w, as the competencies that they value serve as a strong indicator of what they are desiring in their own development. 120 students participated in the online questionnaire across all 5 of the participant institutions. All ethical protocols were followed as stated in the methodology. All responses were anonymous with no personal details required in order to ensure freedom of opinion in the participant students. The students were given 6 questions, 4 of which were valuations of the various competencies broken up into 4 categories: Personal, Professional, Cognitive and Emotional. For these first 4 questions the students were asked to give a value ranking between 1 (not at all important) and 10 (extremely important) for each competency with regard to preparing them for their professional career. What follows is a breakdown of the results for each of the 4 questions with tables indicating the valued competency rated from highest value to lowest valued. This is then followed by the data from the final 2 questions of the questionnaire.

4.4.1 Question 1: Personal competencies

Table 4. 7 Personal Competencies average valuation out of 10 from questionnaire

Competency	Average
Willingness to learn	9,27
Good work ethic	9,15
Being trusted/dependable	9,14
Responsible	9,11
Honesty	9,11
Self-Discipline	9,06
Being motivated and committed	9
Professionalism	8,84
Knowledge of yourself	8,51
Independence (living/working on your own. Being self-sufficient)	7,86
Deportment (the way a person stands and walks, particularly as an element of etiquette and behaviour)	7,7
Relating to others	7,68
Participation in the world around you / being a participant citizen	7,31
Personal communication (communicating personal thoughts and feelings with others)	7,28

This table demonstrates that all of the personal competencies were valued quite highly by the students but one finding stands in contrast to what was seen in the interviews, namely the valuation of communication and teamwork. In the interviews with the participant PHEI representatives, teamwork and communication were very highly valued and sought-after competencies, while the students have it valued least among the personal competencies that make them prepared for their profession. What they did value were competencies related to individual effort, trustworthiness and dependability, while honesty had nearly 60% of responses of 10 out of 10. And while the averages of the responses are not too far apart, the difference can be seen when looking at the percentage of responses below the average.

Table 4. 8 Percentage of valuation scores of 7 and below for Personal Competencies

Percentage of responses of 7 and below			
Bottom 3 Competencies		**Top 3 Competencies**	
Personal communication (communicating personal thoughts and feelings with others)	52,10%	Willingness to learn	5,98%
Participation in the world around you / being a participant citizen	45,37%	Good work ethic	10,92%
Relating to others	46,60%	Being trusted/dependable	12,50%

These figures indicate that a much greater percentage of students did not value the team-based, social aspect nearly as much as the more internal, individually based competencies.

4.4.2 Question 2: Professional Competencies

Table 4. 9 Professional Competencies average valuation out of 10 from questionnaire

Competency	**Average**
Professional communication (Communicating ideas, plans, decisions, etc.)	8,96
Time management	8,95
Listening skills	8,92
Managing yourself	8,86
Having clear expectations from employers and for yourself	8,81
Conflict resolution	8,75
Teamwork	8,74
Good understanding of business	8,58
Flexibility in role and tasks within your job	8,48
Technical competence in your specific area of focus	8,35
Selling yourself	8,33
Academic literacy	8,27
Presentation skills / sharing knowledge	8,27

Entrepreneurship	7,93
Computer literacy	7,78
Numeracy	7,74
Professional writing	7,68

In question 2 there was a closer range of responses than in question 1 and in stark contrast to question 1, communication, albeit in a professional sense, was the most valued competency. This very much indicates that there is a very clear distinction between personal communication and professional communication and while the latter is viewed as a very important competency in the development of a career, the former is not seen in the same regard. Interestingly, technical competence in the specific area of focus was not even in the top half of the table in valuation indicating a stronger affinity of students to the more generalised aspects. This goes further when viewing that the bottom third of the table is comprised of the more traditional academic and school-based concepts such as numeracy, academic literacy and professional writing. It seems clear that when valuing competencies that can help in the development of their careers, the competencies that are often seen as “soft-skills” are valued more than the academic or content-based competencies. The table below highlights the large proportion of responses that undervalued traditional academic competencies as opposed to the far less that undervalued the more traditional “soft skills”. In fact, for professional communication, time management and listening skills, approximately 50% of responses gave them 10 out of 10 valuations.

Table 4. 10 Percentage of valuation scores of 7 and below for Professional Competencies

Percentage of responses of 7 and below			
Traditional academic		**Traditional "soft skill"**	
Numeracy	43,59%	Professional communication (Communicating ideas, plans, decisions, etc.)	13,05%
Computer literacy	41,52%	Time management	11,86%
Professional writing	41,53%	Listening skills	14,40%

4.4.3 Question 3: Cognitive competencies

Table 4. 11 Cognitive competencies average valuation out of 10 from questionnaire

Competency	Average
Being able to apply knowledge into the real world	9,25
Problem solving / Generating solutions	9,08
Good decision making	9,06
Attention to detail	9
Reasoning and logic	8,89
Having industry specific knowledge	8,83
Creative thinking	8,82
Critical thinking and evaluating	8,75
Analytical skills	8,56
Develop and justify opinions and ideas	8,56
Reflexive thinking (thinking about ones own actions, behaviour and decisions)	8,5
Having a wide variety of knowledge	8,34
Linking different concepts together	8,32
Intellectual Integrity - sourcing, referencing and using information responsibly	8,19
Preparation for higher levels of academia and qualifications	8,01

The first discovery in question 3 was that the average responses, overall, had higher ratings than in both question 1 and 2 with the lowest average rating of over 8. This would indicate that as a generalisation, students tend to value cognitive competencies more than personal or professional ones. Another standout statistic was that being able to apply knowledge into the real world had 61.86% of responses of 10 out of 10 indicating this was an extremely valued competency from the students. As in question 2, the lowest valued competencies in this category relate to academics and schooling. It is important to note that an 8 out of 10 valuation is seen as important but in comparison to more generalised cognitive competencies such as problem solving, decision making and attention to detail, it became clear that there is a preference when it came to career development.

4.4.4 Question 4: Emotional competencies

Table 4. 12 Emotional competencies average valuation out of 10 from questionnaire

Competency	Average
Stress Management	9,18
Emotional Maturity	9,14
Being able to separate personal and professional issues	9,11
Dealing constructively with criticism	9,03
Being emotionally prepared for the working world	8,91
Appropriate responses to various situations	8,83
Emotional stability	8,77
Emotional Intelligence (Managing one's emotions and those of others)	8,56
Developing a "tough skin"	8,43
Consideration for other people	8,34
Kindness and Caring	8,14
Empathy	8,06

The top 4 ranked competencies were very much based on a person's ability to protect themselves emotionally in the world of work. Stress management and being able to separate personal and professional issues each had 62.93% and 62.07% 10 out of 10 responses respectively – the 2 highest 10 out of 10 rated competencies in all 4 categories. This would indicate that students value being able to handle stress within the work environment as a major influencing factor on career success. While at the other end of the table, competencies that demonstrate emotional openness in kindness, caring and empathy and consideration for people, while overall still valued, are comparatively less valued. The most interesting finding was that out of all 4 of the categories of competencies, the emotional category has the highest score average (See table 4.13). This indicates that the students value emotional competencies with regards to career development more so than any other category. Interestingly, professional competencies had the lowest average rating of the 4 categories considering the questions were to value the competency in relation to preparation for their professional careers, which seems almost counter-intuitive.

Table 4. 13 Average score of all competencies in each category

Category	Average score
Personal	8,501
Professional	8,435
Cognitive	8,677
Emotional	8,708

4.4.5 Question 5 and 6: Development of competencies

Questions 5 and 6 were supplementary questions to see how students feel about the development of competencies in their institutions. Question 5 revealed that 73.27% of respondents were positive in this sentiment indicating that their institutions definitely promoted the development of competencies within their structures. Question 6 gave a little more insight into this when the students were asked to rate the development of the 4 categories of competencies in their institutions, ranging from 1 (not doing anything to promote competency development) to 10 (the institution continually and successfully promotes and develops competencies). Figure 4.1 below indicates the averages in rating: 7.33; 8.16; 7.48; and 6.59.

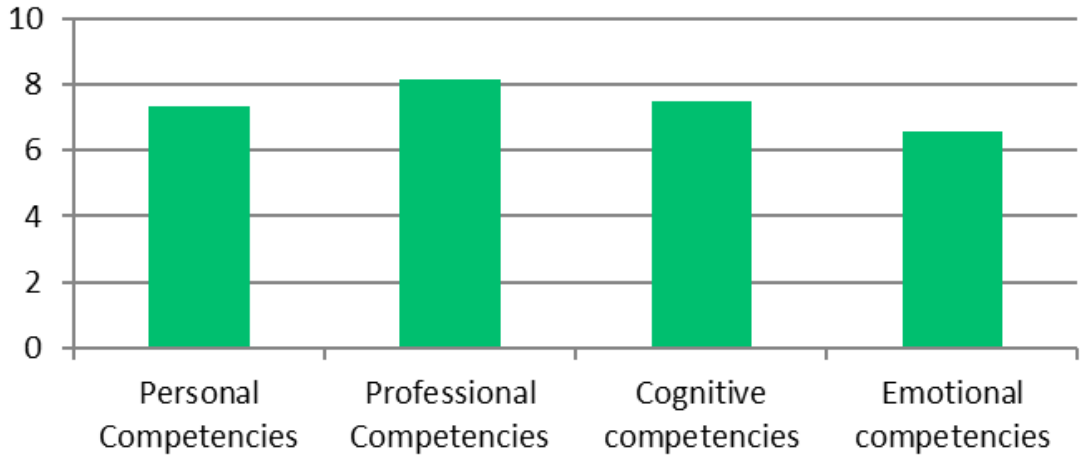

Figure 4. 1 Average ratings given by students on how well their institutions develop the various competencies

From the graph it is clear that, from a student's perspective, the institutions seem to prioritise the development of professional competencies while the emotional competencies are focussed on to a lesser extent. This is very interesting in that it is completely opposite to the valuation of categories by the students. The students placed the greatest value on emotional competencies and the least on professional competencies, and yet they believe that the institutions they are in focus on the professional category. There definitely seems to be a disparity in what competencies the students' value and what they feel the institutions focus on developing.

4.5 Conclusion

The section has presented the findings from all three sections of the research methodology. The document analysis provided information that were used to familiarize the researcher with the institutions and provide a base from which to construct the data collection tools, namely, the interviews and questionnaires. The findings showed the propensity of the PHEIs towards professional traits while simultaneously paying very little attention to the emotional aspect within their documents.

The interviews then provided some interesting and detailed information. Most of the representatives agreed that students are generally unprepared for higher education which presented the discussion of the different articulation gaps the interviewees has experienced. There was also some agreement in key competencies the representatives thought higher education students lacked. These included academic literacy, numeracy and the soft skills required to manage higher education learning. The major warning signs that indicated a concern in a student's ability to handle higher education were absenteeism and lack of engagement. During the discussion of warning signs, another finding presented itself in the type of discourse that was used by the representatives. This was discussed and presented as Educational Process discourse and Educational Substance discourse. While this was not immediately relevant to the objectives of the study, the finding did provide a discussion point for future research.

The section on how institutions developed competencies within students currently provided 4 methods that are in use. Some institutions looked at restructuring the curriculum to include competency focused content, while extra-curricular workshops were a common choice. The third option was that of building stronger individual relationships with the students, however this was

mostly in the smaller institutions. The final strategy to develop competencies was to use the Work Integrated Learning (WIL) aspect of the programme at various stages of the qualification. The penultimate finding from the interview was that of an ethos of developing competencies within the staff of the PHEIs. The majority of responses claimed that there was a good, positive level of commitment to developing students shown by the staff, however in one or two instances, the problem of monitoring and follow through on those development strategies was questioned. Finally, the valued competencies given by the PHEI representatives were tabled in table 4.6 which provided the starting point for the highly structured questionnaire.

The findings from the highly structured questionnaire were displayed in a number of tables that indicated the points value of each of the competencies. While all of the competencies were valued quite highly, comparatively it became clear which of the competencies were valued most. Another finding that was of interest, but not directly relevant to the objectives of the study was that the students made a very clear and stark distinction between personal communication and professional communication competence, where the former was valued far less than the latter.

These findings, combined with the document analysis and interview findings, provide the data needed to construct an enriched, more detailed conceptualisation of IC_w. The next chapter will discuss these findings in more detail and link them directly to the development of IC_w and the construction of the assessment tools.

Chapter 5 – Discussion

5.1 Introduction

Thus far, this study has introduced and discussed the concept of IC and argued its importance as a critical functioning in the capability of work (IC_w) and the development of better prepared, more work capable graduates from higher education institutions (HEI). The previous chapter presented the findings of the exploratory mixed-method research. This chapter will discuss the findings of the study in relation to the objectives and research questions presented in Chapter 1. The objectives of the study were twofold:

1. To develop the concept of Independent Capability for Work ($IC_{w)}$ and construct a consolidated, detailed, purposeful conception.
2. To create an assessment tool to measure levels of IC_w engagement in education.

This chapter will first discuss the findings that help achieve objective 1 but will also explore some unforeseen findings that developed through the research process. These findings will provide a broader context to help facilitate discussion of IC_w within a Capabilities Approach perspective of education in the future. This chapter will then address the second objective with the presentation of a proposal for an analytical tool that can be used to assess the presence of IC_w engagement within educational spheres of curriculum, pedagogy and assessment within a private higher education context.

5.2 A consolidated concept of IC

When addressing the first objective of the study, Chapter 2 introduced the concept of IC as the ability of a person to solve unfamiliar problems in an unfamiliar context without specific prior preparation. This was distinct from Dependent Capability (DC) which is the ability of people to solve familiar problems in familiar contexts. This study aligned with the perspective of Stephenson (2012) when he argued that issues of quality in education and graduates were largely affected by a lack of IC being developed in students. The study focused on the issue of a decreasing confidence in higher education graduates by employers and the labour sector in South Africa and

proposed that IC development with specific focus on employability and workspace success could provide a solution. The study proposed that CA offered valuable insights into how education could be most useful and impactful by having education enable students to better utilise their valued functionings to achieve their various capabilities. Within the framework of CA, IC was a critical functioning for achievement in the capability of work, and so by developing and refining our understanding of IC in this context (IC_w), student would be better equipped and capable to enter the labour market and improve employability.

This study then argued that the current definition of IC was too vague and required a more specific and detailed conceptualisation to aid in operationalising a Capabilities Approach to education, namely, IC_w. The goal then was to explore IC_w in a South African PHE context and determine what IC_w actually meant; what was it comprised of? In Chapter 2, IC_w was discussed as a combination of competencies from 3 broad aspects in Emotions, Cognitive Processing and Personal/Professional Traits in an effort to frame IC_w as a more specific and detailed conceptualisation.

As discussed in Chapter 3, the methodology for the development of a more purposeful and consolidated concept of IC_w utilised the Exploratory mixed method approach explained by Creswell & Clark (2011) whereby a primary qualitative analysis to explore the concept of IC_w was then followed by a quantitative analysis of the concept with priority given to the qualitative research. This type of mixed method research is best utilised when "Measures or instruments are not available, the variables are unknown, or there is no guiding framework or theory" (Creswell & Clark, 2011, p. 75). This is very much the case with the concept of IC_w, hence the need for the exploratory research method.

The research was then conducted to ascertain what competencies/functionings within the 3 aspects of Emotions, Cognitive processing, and Personal/Professional Traits were most valued by Private Higher Education Institutions (PHEIs) through a document analysis, through semi-structured interviews with their representatives, and their students through a highly structured questionnaire. The document analysis provided a baseline on which to build the questions of the semi-structured interviews. It also allowed for a refinement of the primary 3 categories to 5 categories of competency namely: Personal, Professional, Emotional, Cognitive and Other. This allowed for a more accurate and detailed gathering of the valued competencies within the document analysis and subsequently in the interviews and questionnaires. A key point to mention here is the splitting of Personal/Professional Traits into two categories namely personal and

professional competencies during competency collection and valuation, however, it then became clear during the data analysis that both professional and personal traits were needed for success in the working environment, which resulted in the re-merging of the two categories into the one Personal/Professional traits aspect of IC_w.

Drawing on the findings that emerged from the data analysis detailed in Chapter 4, the discussion now presents the core competencies that were most valued by participants with respect to success in their chosen careers and how they have been refined into the key functionings that constitute $IC_{w,}$, categorised into the three aspects of Cognitive, Emotional, and Personal/Professional Traits. At the end of each explanantion are newly formed definitions for each of these functionings, contextualised for $IC_{w.}$

5.2.1 Cognitive Competencies

From the findings of the research, three competencies have been identified that represent the valued cognitive aspects of IC.

5.2.1.1 Academic Literacy

Academic literacy was a concept that was referred to quite frequently by participants throughout the research. It was raised primarily by the participant PHEI representatives during the interviews. It appeared as part of the discussion of academic gaps that arose from questions of student preparedness. It arose again in the lacking competencies section of the interview, and then again in both discussion of warning signs and practices of developing competencies within the PHEIs. It often stemmed from discussion of reading and writing, which would fall into the Dependent Capability sphere, but academic literacy was always discussed as a step or two more complex. Academic literacy was actually classified as a professional competency during the research questioning, however during the interview and discussions, it became clear that academic literacy is better described within the cognitive field.

As discussed in Chapter 4, academic literacy was described in terms of the student's ability to engage critically with academic content, to analyse and utilise information in an academic environment as well as understand and apply sound referencing principles to their work. This aligns well with Bilikozen, (2019, p. 200) when he discusses that academic literacy

"...does not simply refer to the teaching of academic reading and writing skills with a focus on grammar instruction and study skills. … academic literacy… refers to the activity of interpretation and production of academic and discipline-based texts."

Interpretation and production of information from a text-based medium are high level, complex cognitive functions. Moreover, within the context of IC_w, academic literacy typifies the example of relying on oneself to engage with and understand new knowledge without previous, specific instruction or preparation. The ability to read and write are obviously key requirements to facilitate academic literacy, but being able to learn new terms, concepts, and theories, understand them and apply them to current practice requires higher cognitive functioning. This also encompasses a person's ability to research; to find potential solutions to problems through the reading, and then integrating those possibilities to fulfil their valued functionings. In order to make the unfamiliar familiar within an educational space and then a work environment, academic literacy is a key cognitive competency of IC_w.

Thus, this study proposes a definition of academic literacy within the context of IC_w as *the ability of an individual to engage meaningfully with academic material in order to understand new knowledge or concepts, or to develop new behaviours in the solving of work-based problems.*

5.2.1.2 Application of knowledge to the real world

The second of the cognitive competencies was the second highest valued competency across the entire questionnaire with an average score of 9.25 out of 10 (See table 4.11, Chapter 4, p. 133). The student participants of the questionnaire greatly valued the ability to apply the theory and concepts they had learned – or are currently learning – to the real world. This valuation of the ability to implement concepts indicates the value the students put on the transition of abstract, scientific concepts into concrete, everyday concepts in their cognitive functioning. This process has been discussed quite often and profoundly across educational discourse starting with the work of Lev Vygotsky.

Vygotsky (1978) was a major contributor to the understanding of how people learned, or rather developed concepts within their thinking. Vygotsky believed that learning was socio-genetic in nature and thus originated through interactions within a social context, before being internalized by the learner and assimilated into their pre-existing structures of cognition and thought. Thus, learning concepts preceded the cognitive development of the learner, and thus the engagement with more and more complex concepts allowed for learners to develop further than those who were not exposed to this engagement.

Vygotsky separated concepts into two categories. The first was everyday concepts. These are concepts that are engaged with through normal, day-to-day interactions with society. Basil Bernstein (1999) classified these as spontaneous concepts, as these concepts were learned without real intention to learn, but rather were acquired from the necessary interactions to survive and live within a society. The second category of concepts given by Vygotsky were called scientific concepts. These were defined by their removal from context specific engagement to a more abstract, generalizable nature. Bernstein called these non-spontaneous concepts as these concepts were only engaged with through intention of engagement.

The dichotomy of concepts allowed Vygotsky (1978) to describe the process of learning as a movement between everyday concepts and scientific ones. He illustrated this when he discussed the Zone of Proximal Development (ZPD). The ZPD describes the distance between the conceptual level a learner can reach without assistance and the conceptual level a learner can reach with assistance. The key point here is that by assisting a learner to engage with more complex scientific concepts the learner can assimilate it into the pre-existing cognitive systems and structure and thus reach a higher level of cognitive ability. By assisting the linking of the scientific concept to the everyday concepts, learners are able to establish a new, more complex base level of cognition and conceptual engagement which subsequently can be used as a new base to reach the next level of complex scientific concepts.

The cognitive ability to apply knowledge to the real world is an already valued aspect of education and learning and has been for some time, however the significantly higher valuation by the student participants suggests that there is perhaps more to it. In addition, there is a strong suggestion that the students are valuing content or concepts that they can link strongly with their real-world engagement. Probably because concepts that are immediately easier to understand and be transitioned into concrete form allows for a faster learning process and a quicker way to develop cognitive function and physical skill.

Regardless of this extended perspective, the valuation of being able to convert theory into behavioural practice is strongly aligned with IC_w. Sternberg's theory of successful intelligence emphasises the "… combination of analytical, creative and practical abilities*"* (Sternberg, 2005, p. 189) in the pursuit of achieving one's goals. The implementation of knowledge is fundamental to the fulfilment of one's valued functioning's and thus a key competency to the development of IC_w. This study proposes that the definition for the application of knowledge to real world in IC_w

terms is *the ability to successfully integrate and implement theoretical knowledge into overt, practical behaviour within the work environment.*

5.2.1.3 Critical Thinking and Problem Solving

Critical thinking and problem solving were mentioned significantly in the interviews and valued highly in the questionnaires. Both competencies were referred to either directly or indirectly when discussing the independence gap of students entering tertiary education. Students would struggle to manage their own learning and rather wait for a lecturer or teacher to present the solution to them. This process then negates the process of critical thinking and problem solving past an elementary level of effort. This is very indicative of dependent capability (DC) being developed within the student through their prior schooling. Conversely, IC requires a deep cognitive process directed at generating solutions to newly experienced problems. This then justifies the decision of the study to combine the 2 separate competencies into one category. Critical thinking describes the cognitive process while problem solving provides the direction to which the cognitive process is aimed. In terms of IC_w these two competencies are inextricably linked as described below.

John Dewey - often referred to as the "father" of modern critical thinking – defined critical thinking as an:

> *"Active, persistent and careful consideration of a belief or supposed form of knowledge in the light of the grounds which support it and the further conclusions to which it tends."* (Fisher, 2001, p. 2)

Here the definition highlights the depth of the thinking process that critical thinking encompasses. Not only are individuals engaging with a concept, but they are also scrutinizing the premises that support it as a theory, fact or concept. Moreover, the individuals are also required to link the premises and concept with the conclusions that arise from the acceptance of the concept. In the experiencing of new concepts or knowledge within a new environment or situation, this cognitive process is required in order to acquire a true understanding. And of course, the more efficient and practiced an individual is in critical thinking, the more adaptable, flexible and capable they become at dealing with other new problems and contexts.

This is emphasized in another definition of critical thinking.

> *"… a mode of thinking – about any subject, content or problem – in which the thinker improves the quality of his or her thinking by skillfully taking charge of the structures*

> *inherent in thinking and imposing intellectual standards upon them.* (Paul, Fisher & Nosich in Fisher, 2001, p. 4)

Improving the quality of thinking through the application of experience and theoretical standards helps individuals when faced with new problems and situations. If individuals are able to not only follow analytical steps in the understanding of a new problem, but to also measure that understanding through previously understood standards, then individuals are better able to move new knowledge or abstract concepts into a more concrete form.

As said above, critical thinking describes the cognitive process of engaging with concepts or experiences. While IC does embrace this cognitive process, it is also focussed on an individual's ability to solve new problems in new scenarios and contexts. Thus, the addition of the problem-solving competency.

> *"Problem solving is the cognitive processing directed at achieving a goal when no solution method is obvious to the problem solver."* (Mayer 1992 in Mayer & Wittrock, 1996, p. 47)

This definition emphasises the link between problem solving and dealing with new issues. Mayer and Wittrock (1996) discuss how problem solving is a directed concept, whereby the problem-solvers thoughts are motivated towards an issue, concept or experience, while also being personal. The problem-solver's ability to deal with the problem is based on their own personal problem-solving experience and education. They go further to discuss that the effectiveness and success of a problem-solver when dealing with a problem relies on the person's ability to transfer prior problem-solving experience and knowledge to the new problem.

"Problem-solving transfer occurs when a person uses previous problem-solving experience to devise a solution for a new problem." (Mayer & Wittrock, 1996, p. 47)

Problem-solving transfer can be both positive and negative. When individuals successfully transfer previous problem-solving knowledge that helps them understand and solve the new problem this is obviously positive. However, if the previous problem-solving knowledge is flawed, problematic, or incomplete, the transfer to the new problem can actually hinder the attempt.

In more recent educational discussions, problem solving has looked to incorporate critical thinking in its own definitions. Within the realms of problem-based learning and modern mathematical curriculum, problem solving:

> *"is regarded as a complex cognitive activity that utilizes an individual's intellectual faculties (memory, perception, reasoning, conceptualization, and language) and appetitive faculties (emotions, motivation, and self-confidence) …* [and] *refers to a systematic approach in conceptualizing and understanding a given problem, designing strategies to solve the problem, and evaluating the strategies implemented."* (Albay, 2020, p. 70)

Thus, in the context of IC_w critical thinking and problem solving are combined to encompass *the cognitive thinking process of an individual towards the analysis of problems and the utilising of previous experience and knowledge in the creation of solutions to work-based issues.*

5.2.2 Emotional Competencies

This study has distilled three emotional competencies from the data analysis that emphasize the valuations of the participants and the context to which they refer. These three competencies then represent the emotional aspect of IC_w as valued by the participants and research.

5.2.2.1 Stress Management

Stress management was the top valued emotional competency in the category for the student questionnaire. It was also mentioned in the interviews by the PHEI representatives. (Piotrowski & Hollar, 2019, para. 1) define stress as:

> *"A psychophysiological response to real or perceived pressures in the environment, including danger; prolonged stress contributes to hormonal imbalances, lowered immune system function, and increased susceptibility to disease."*

While stress has some physical impact on the human body, it also has an impact on behaviour and specifically the performance of individuals when dealing with problems in their day-to-day activities.

> *"Stress can exacerbate difficulties in daily functioning, slow recovery from mental or physical problems, and impede immunological functioning."* (Piotrowski, 2020, para. 2)

Thus, the ability of a person to cope with the various pressures and sources of stress in an individual's life becomes a vital determinant of a person's ability to fulfil their valued functionings.

The problems and dangers of stress on wellbeing and performance are widely known and well researched (Chrousos, 2009; Malinauskas, Saulius, and Kaufmanas, 2019; Seaward, 2017). There are a multitude of sources that can cause this stress within the lives of students however one type of stress is particularly relevant in the educational space.

> *"Information stress is especially conspicuous in students' learning activities, which are pervaded with the large amounts of information acquired from teaching, scientific, and other types of sources, coming from the external natural and social environment."* (Malinauskas et al., 2019, p. 30)

As discussed in the findings, there are four articulation gaps that students new to tertiary education face that were identified by the interviews: Technological, Academic, Expectations and Independence. The last two are where a lack of stress management or coping techniques can really affect students' performance. With the engagement of new content, pedagogical techniques, and levels of responsibility and expectations students are faced with an overload of new information which they struggle to organise and respond to. Dealing with information stress is fundamental to their induction into the new tertiary environment, and then again when entering the workforce.

> *"Stress coping is an everchanging behavioural, cognitive, and emotional effort to deal with specific internal and/or external demands that complicate or exceed a person's capabilities"* (Malinauskas et al., 2019, p. 30)

As a component of IC_w, stress management refers to *the ability of an individual to identify sources of stress and, through the application of successful coping mechanisms, learn to mitigate or minimize the negative impact of stress on the fulfilment of valued functionings in the workplace*.

5.2.2.2 Emotional Management

When analysing the emotional competencies there appeared to be a fair number of overlapping concepts, none greater than the case of Emotional Intelligence (EI). EI as a concept has been researched in depth for a number of years and as a result has a number of competencies that constitute it (Boyatzis, 2011; Boyatzis et al., 2002; Boyatzis & Sala, 2004; Cherniss, 2000; Schutte et al., 1998). These competencies include empathy, stress tolerance, self-awareness, problem solving among others, and have allowed for EI and Emotional Quotient (EQ) tests to be designed and implemented to measure EI levels of individuals (Schutte et al., 1998).

This conceptualization of EI, while well researched and developed, is quite broad and actually quite removed from the original conceptualization of EI presented by its originators Salovey and Mayer in 1990 (Mayer, Salovey, and Caruso, 2008). Mayer et al. (2008) discuss how through factors such as the popularity of the work produced by Goleman and other authors that were based on their original work, the concept of EI has grown and developed both out of proportion and along different paths.

> *"For example, one refereed journal article noted that "EI accounts for over 85% of outstanding performance in top leaders" and "EI—not IQ—predicts top performance" (Watkin, 2000, p. 89). Our own work never made such claims, and we actively critiqued them."* (Mayer et al., 2008, p. 504)

This problem of divergent paths, applications and expansions of EI was supported by Waterhouse (2006) when she indicates that some of the many different constructs of EI actually started conflicting with each other. This lack of a unitary concept of EI has diluted the validity of the concept in general terms, so while EI is a well-known concept, the understanding of its intricacies is largely unknown or misunderstood. In order to not add to the dilution and misrepresentation of EI, for the purposes of refining the concept of IC_w, Emotional Management will be used to describe the emotional competency revealed in the findings of this study.

As discussed in Chapter 2, EI is a competency that entails the understanding and management of emotions within an individual and within others.

> *"…emotional intelligence competency is an ability to recognize, understand, and use emotional information about oneself or others that leads to or causes effective or superior performance."* (Boyatzis & Sala, 2004, p. 5)

This definition of EI really emphasises the management of emotional knowledge with the purpose of better performance. As discussed in Chapter 2, IC_w really exists at a behavioural level and so utilizing the term *intelligence* is misleading. As a functioning of IC_w, the focus should be placed on the emotional management to improve performance. This better performance can be within any sphere or aspect of one's life that a person desires in which to perform better.

The link between managing emotions (through the lens of EI) and performance has been contentious across academics, however Perera & DiGiacomo (2013) conducted a meta-analysis of research on the impact an EI score had on academic performance and found that there was a

modest to moderate impact. Schutte & Loi (2014) summated that good EI levels increased performance in a work environment.

> *"Better perception, understanding, and regulation of emotion, core components of emotional intelligence, may facilitate employees' mastery of workplace events and reactions to events, encouraging a greater sense of power. Better perception, understanding, and regulation of emotion may also lead to better interpersonal work relationships and thus to more satisfaction with the social support offered by the workplace. The competencies comprising emotional intelligence may directly facilitate workplace flourishing and may also indirectly impact workplace flourishing through encouraging development of other qualities such as perception of power and workplace satisfaction that may in turn further encourage workplace flourishing."* (Schutte & Loi, 2014, p. 135)

Through the improvement of managing emotions, individuals are seemingly more capable at achieving success which directly aligns with the Capabilities Approach idea of fulfilling ones valued functionings. Thus, as a functioning of IC_w, Emotional Management is described as *the ability of individuals to manage and control their emotions in order to improve performance in work-based tasks.*

5.2.2.3 Emotional Protection

After stress management and emotional maturity, the next 3 highest ranked emotional competencies by the questionnaire participants were: (1) being able to separate personal and professional issues, (2) dealing with constructive criticism and (3) being emotionally prepared for work. All these notions link to the concept of protecting one's emotions within professional environments.

Separating personal issues from professional issues involves the compartmentalising of personal feelings and emotions away from some of the harder decisions made in the working world. Dealing with constructive criticism involves confronting personal failings from a more objective perspective in order to improve performance. Being emotionally prepared for work implies being able to deal with the various emotional strains and stresses of the work environment. Each of these three competencies indicate the value of being able to protect oneself against the emotional hardships and strains that the work environment can produce.

While Emotional Management can encompass some of these competencies, I argue that in the case of IC_w, having a specific functioning that deals with the protection of emotional well-being in a professional work environment adds value to our ability to understand IC_w. In the questionnaire findings on emotional competencies, a pattern emerged whereby competencies that implied protecting one's emotions, or emotional compartmentalisation, where generally valued significantly higher than competencies that implied emotional openness such as empathy, kindness and caring and consideration for other people. This leads me to believe that the participant students valued the ability to protect or separate their personal emotion from their work.

As discussed above in the Schutte and Loi (2014) quote, EI does include the "*mastery of workplace events and reactions to events"* which would seem to imply the ability of a person to compartmentalise and protect themselves emotionally. I argue that there is a distinction between the controlling of emotions during work to facilitate better performance, and having those interactions affect you in a negative way once outside of the specific context. In other words, people who have experienced jarring emotional events within the work environment may well, through good levels of Emotional Management, display (at least externally) behaviours that facilitate progression in the task, but the internal emotional effects may still exist only to surface in a more private setting. It is clear that the participant students valued both the ability to control emotions in the workplace but also ability to protect themselves from emotional harm.

Emotional Protection is described as *the ability of individuals to protect, cope and deal with negative emotions deriving from workplace events.*

5.2.3 Personal/Professional Traits (Individual Characteristics/Traits

The final category of IC_w are those professional traits that are valued. As discussed in Chapter 4, what started as a singular category of competencies was split into personal and professional competencies during the research phase of the study. This allowed for more detailed and nuanced research when valuating which individual characteristics the participants found important. From both categories, 3 competencies have been refined to represent the personal/professional traits component of IC_w.

5.2.3.1 Teamwork

Teamwork was the top mentioned and valued competency that educators and PHEI representatives wished to see within their students. It was seen as both a personal and professional competency at first but was then refined for the questionnaire as a professional trait. The main reason for this is the idea of teamwork has an element of directionality – working with other people in order to achieve a task – and as such, upon reflection, it was felt to be more relevant as a professional trait. Teamwork was in the top half of the valued professional competencies in the questionnaire, but the importance really came from the PHEI representatives.

Teamwork has a number of elements to it. The following two definitions are forwarded:

> "*A team is a group of individuals united in pursuit of a common mission"* (Sohmen, 2013 cited in Stahlke & Dahlke, 2020, p. 112).
>
> *"cooperative effort made by the members of a team to achieve a common goal."* (Tambe, 1997, p. 83)

Both definitions indicate the previously mentioned directionality of teamwork towards a common goal. They also include the togetherness or the unification of different individuals to form a specific group. The second definition also raises the aspect of cooperation. Tambe (1997. p 83) discusses how teamwork is more than the simple "unification of simultaneous coordinated activity" but teamwork is rather more complex and dynamic. To emphasise the point, Tambe refers to an example of driving in traffic provided by Cohen & Levesque. Cohen & Levesque, (1991) discuss how driving in traffic is a series of coordinated actions and events marshalled and coordinated by traffic signs but not considered as teamwork. Driving in convoy through the same system adds the element team membership and common goal and thus is labelled teamwork. Bell et al. (2018, p. 349) echoes the concept of individual efforts being coordinated to a specific end when saying that:

> "*Teamwork involves team members' interdependent behaviours that translate inputs (e.g., capabilities, materials, resources) into outputs (e.g., products)"*

From these conceptualisations it is important acknowledge that teamwork as a competency requires an individual to firstly acknowledge membership to a team and secondly engage with the common goal of the team. Without these two key criteria only coordinated actions can take place. Cohen & Levesque (1991) in their exploration of teamwork emphasises the need for joint intention to not only act towards a shared goal, but to continue until a mutual agreement has been reached

that the team activity is over. This commitment to the cause over time is really where success and achievement within a team eclipses individual achievement in both scale and timeframe. It is also incorporating an element of trust between individuals of the team to act in a mutually beneficial way. Being trusted was the third most valued individual characteristic from the questionnaire, while honesty was right behind it. The value of being trusted and recognising honesty within others is held in high regard such is the value of commitment to teamwork. If individuals can believe that other people will commit and perform the mutually beneficial actions towards a shared goal, they are themselves obligated into that commitment as well.

IC_w is about utilising resources to enact valued functionings successfully and within the work environment, and this very much involves interacting with people. Teamwork can become a more effective and efficient way in order to enact those valued functionings. Thus, teamwork is a vital competency of IC_w which will be simply defined as the *ability of an individual to engage and coordinate effectively with others in order achieve a goal, task or enact valued work-based functionings.*

5.2.3.2 Communication

During the interviews, communication as a competency arose a relatively high number of times alluding to both personal and professional communication. Hence, communication was categorised under the "Other" category in the document analysis. In preparation for the questionnaires, communication as a competency was separated into personal communication – communicating personal thoughts and feelings with others – and professional communication – communicating ideas, plans, decisions, etc. As stated, this was to get a more nuanced insight into the valuation of the participants.

The very interesting finding was that professional communication was valued as the top professional competency by the participant students while personal communication was the least valued personal competency. For them there is an obvious distinction between personal and professional communication as well as a clear de-valuing of the link between discussing personal opinions and feelings and career success. This is in clear contrast to the findings of Schutte & Loi, (2014) when they discuss the concept of social support in the workplace.

Social support as defined by Schumaker & Brownell (1984) (as cited in Schutte & Loi, 2014, p. 135) as:

''an exchange of resources between at least two individuals perceived by the provider or the recipient to be intended to enhance the wellbeing of the recipient''

Schutte and Loi (2014) discussed the many potential stressors that take place within the work environment. These include lighter, less impactful everyday hassles and well as more serious and impactful actions such as bullying or harassment. Social support and being able to communicate personally within the work environment has a positive affect on aspects such as absenteeism, burnout, and job satisfaction. From the findings of this study, it appears that the student participants struggle to see the link between communicating on a personal level and improved workplace performance. Being able to discuss feelings and personal opinions with colleagues does in fact support the wellbeing of individuals which places them in a better capability space in which to enact valued functionings.

Conversely the participant students placed the highest value on professional communication when thinking about impact on professional career. Professional communication involves scientific and abstract knowledge of technical jargon, content specific terminology and systematic argument and evaluation. These imply a firm understanding and knowledge basis of the particular work context and as such may seem more valued to the everyday, common level of engagement with personal opinions. However, the participant PHEI representatives drew less of a distinction between personal and professional communication in that their student should be able to communicate effectively in both contexts. This emphasises the need to construct logical, persuasive arguments and providing a clear message which can be easily understood by others. Thus, as a functioning of IC_w, communication is defined as *the ability of an individual to clearly communicate ideas, thoughts, feelings and arguments to others in both personal and professional contexts*.

5.2.3.3 Self-development

The highest valued competency throughout the entire questionnaire was willingness to learn with an average score of 9.27 out of 10. This was closely followed by good work ethic with an average of 9.15 with self-discipline coming in at 9.06. These three competencies in particular speak to the motivation and dedication to improving and developing oneself.

Willingness to learn is a competency that describes the behaviour of individuals to analyse and study an item, challenge, event or scenario with the intent to learn more about it. This implies an individual approaching new phenomena with an open, inquisitive and positive attitude. Ajzen (2005, p.3) suggests,

> *"An attitude is a disposition to respond favourably or unfavourably to an object, person, institution, or event."*

Attitude has an evaluative element that will be the starting point for a person's actions in relation to the phenomena. Thus, with favourable and positive disposition towards learning, individuals are better positioned to immerse themselves in the new phenomena and context, and then develop solutions, actions and behaviours in which to engage with them. However, learning is not necessarily a simplistic and quick process. Learning a new concept or abstract form of knowledge during engagement with new phenomena may be prolonged and challenging. As a result, in order to learn and develop yourself there needs to be the element of commitment to the process. These are the competencies of self-discipline and a good work ethic.

Self-discipline is the concept of perseverance in the pursuit of a task that looks to avoid short term reward for long term gain.

> *"The construct is conceptualized as an individual's capacity to suppress or inhibit prepotent or dominant responses in favour of an alternative action that is strategic and services a long-term or higher-order goal"* (Hagger & Hamilton, 2019, p. 325)

Haggar and Hamiltion (2019, p. 325) go on to discuss the kinds of behaviours that self-discipline tend towards.

"From a mechanistic perspective, individuals with high self-discipline are expected to be able to effectively manage conflicts between momentary impulse-driven goals with small, gratifying short-term gains and long-term goals with larger gains that require greater effort and persistence"

Work ethic is the principle that working hard, being dedicated, and working towards something is good and worthy of reward. Having a good work ethic means an individual has a propensity for engaging in work in a positive, committed, and effective fashion – usually in the workplace context. Having a good work ethic is a widely sought-after competency in the working world as there is research that indicates the benefits for companies and businesses to have a high work ethic workforce. Hardardottir et al. (2019, p. 12) discuss a study by Miller et al. (2002) that good work ethic is "vital for business due to its potential to increase long-term efficiency." They go on to discuss that work ethic is a good predictor of behaviours that are favourable within the workplace.

> *"Studies have demonstrated that those with good work ethics are hardworking, last longer with repetitive tasks, work faster and are more productive (Furnham, et al., 1993; Meriac,*

2012; Miller, et al., 2002; Saks, et al., 1996). Employees with good work ethic also work longer hours, take fewer and shorter breaks, and make an active contribution in work-related events (Mudrack, 1997). Furthermore, such employees generally gain more success in their work as they are hardworking and intrinsically more motivated than those who do not have good work ethic (Furnham, 1990; Mudrack, 1997; Faisal et al., 2018).” (Hardardottir et al., 2019, p. 12)

IC_w as a concept is centred around the idea of an individual facing new challenges within a new context without any specific prior knowledge or instruction. This means that the individual is going to engage in and invest effort in activities that may or may not result in some satisfactory conclusion. This uncertainty provides doubt and can lead to an un-willingness to engage in the activity at all or potentially giving up prior to a satisfactory outcome being established. Those individuals who would demonstrate good levels of IC_w are those who are better *able to develop themselves to a place where a satisfactory response to the challenge is not only a known possibility, but with practice and time could in fact be a probability*. This is the functioning of developing the self and it is a fundamental aspect of IC_w.

5.2.4 IC_w as a concept

Stephenson (2012) provided the study with a starting point to understanding Independent Capability, namely, the ability of an individual to deal with unfamiliar problems in an unfamiliar context. They differentiated this type of capability from dependent capability which was being able to deal with familiar problems in a familiar context. They further suggested that in order to display IC successfully an individual would need to display three additional attributes. Firstly, the ability to learn for themselves. Secondly a belief in their personal power to perform, and thirdly the ability to make judgements.

This study has looked to develop the concept of IC within a work context. It supports the beliefs of Stephenson (2012) when he proposed that current perspectives and practices of education do not develop enough IC in students. This study has then tried to develop a deeper, more detailed, contextualised definition of IC focussed on improving the ability of graduates to successfully enter the working world. The study proposed that CA offers a more humanist, developmental perspective of education, and within this framework IC was argued that it is a critical functioning

for the capability of work (IC_w). Thus, this study has looked to develop IC_w through the sector that specifically looks to develop work-based functionings in students, namely, the South African PHEI sector and engagement with institutions, their educators and managers, and their students. IC_w was theoretically broken down into three broad aspects which included a cognitive aspect, and emotional aspect and a personal/professional traits aspect. This study then looked to establish just what work-based functionings constituted IC_w to get a more concrete concept that could be more easily operationalised into education. The discussion above has outlined the three aspects and proposed three functionings for each aspect, that, when displayed by individuals in combination with each other, indicate the level of IC_w of the individual. Table 5.1 below summarises each of the identified functionings.

Table 5. 1 Table summarizing the competencies of IC

IC Aspect	Functioning	Definition	Amalgamated competencies from research
Cognitive	Academic Literacy	*the ability of an individual to engage meaningfully with academic material in order to understand new knowledge or concepts, or to develop new behaviours in the solving of work-based problems.*	Academic Literacy
	Application of knowledge to the real world	*the ability to successfully integrate and implement theoretical knowledge into overt, practical behaviour within the work environment*	Being able to apply knowledge to the real world
	Critical thinking & Problem Solving	*the cognitive thinking process of an individual towards the analysis of problems and the utilising of previous experience and knowledge in the creation of solutions to work-based issues.*	Critical thinking Problem solving / Generating Solutions
Emotional	Stress Management	*the ability of an individual to identify sources of stress and, through the application of successful coping mechanisms, learn to mitigate or minimize the negative impact of stress*	Stress Management

		on the fulfilment of valued functionings in the workplace.	
	Emotional Management	*the ability of individuals to manage and control their emotions in order to improve performance in work-based tasks.*	Emotional Intelligence (Managing one's emotions and those of others) Empathy Emotional Stability Emotional Maturity
	Emotional Protection	*the ability of individuals to protect, cope and deal with negative emotions deriving from workplace events.*	Being able to separate personal and professional issues Dealing with constructive criticism Being emotionally prepared for work
Personal/ Professional Traits	Teamwork	*the ability of an individual to engage and coordinate effectively with others in order achieve a goal, task or enact valued work-based functionings.*	Teamwork
	Communication	*the ability of an individual to clearly communicate ideas, thoughts, feelings and arguments to others in both personal and professional contexts.*	Personal communication (communicating personal thoughts and feelings with others) Professional communication (Communicating ideas, plans, decisions, etc.) Presentation skills / sharing knowledge
	Self-development	*The ability to develop themselves to a place where a satisfactory response to a challenge is not only a known possibility, but with practice and time could in fact be a probability.*	Willingness to learn Good work ethic Self-discipline

With these work-based functionings stated, IC_w as a concept has been fleshed out and detailed within the South African private higher education context. From the review of literature, IC_w has been positioned a critical functioning for achievement in the capability of work. Through the research process, this study has developed an opportunity to advance this definition.

Independent Capability for Work (IC_w) is the ability to integrate and enact work-based functionings effectively in the in achievement in the capability of work.

IC_w could therefore be described as a functioning comprised of sub-functionings. This study has provided 9 core functionings which represent the work-based functionings in this definition. It is important to note that these sub-functionings of IC_w are specific to the context of South African private higher education but can be refined and evolved through research across other education, societal or national contexts, however, these sub-functionings will still exist as part of one of the three aspects of IC_w, namely, emotional, cognitive processing and personal/professional traits.

In order to illustrate what IC_w would look like in practice let's take the functioning of writing. Writing would be considered Dependent Capability (DC) functioning in the distinction provided by Stephenson (2012) as students are required to be familiarised with writing practice and asked to repeat it over in familiar contexts solving more complex writing problems as they progress through education. Enacting this functioning is a necessary requirement in the modern work environment, however, understanding the best ways to write emails, memorandums, reports and other workplace documents in order to get the right message across and invoke positive and/or successful reactions from the other members of work requires the integration of IC_w functionings such as teamwork, emotional management, critical thinking and problem solving, and communication. There will be a stark difference in success at work in this scenario between those who integrate and enact IC_w functionings and those who do not or do this less effectively.

5.3 Construction of IC_w Assessment Tools

With the establishment of a more consolidated conceptualisation of IC_w, the second objective of this study is to develop assessment tools that could help assess IC engagement levels in education. This requires analysing the three "message systems" of education – curriculum, pedagogy and assessment (Bernstein, 1971) – for the presence of, or levels of engagement with IC_w and its 9 core functionings. This objective can prove challenging when considering the different natures of the three messaging systems. Analysing curriculum would essentially be a document and text-based process whereby key words, concepts, and nature of activities would be the centre of focus. This then distils down to an analysis of semantics and key word use which, while indicates a willingness to engage in developing IC_w, really does not give accuracy on a

curriculum's presence of IC. When looking at pedagogy, observation is really the only way to analyse various pedagogical practices and how they engage with IC_w. This would require focus on not only the educator, but the response of the students in the class as well which can prove logistically problematic. Analysing assessments would be a combination of both text-based analysis and observation depending on the multitude of types and forms of assessment that take place within education. Formative assessments that emphasize feedback would have a very different way of engaging students in IC_w functionings than the more traditional summative exams or tests.

These challenges indicate that the development of a complete, deep and universal IC_w analytical tool may be impractical at this stage. While it may be possible in the future, it would require a far greater amount of data and research to achieve that level of complexity and sophistication. Thus, as a first step, I will attempt to provide two different analytical tools with two different aims. The first tool will be designed for a focused and in-depth analysis of IC_w engagement within pedagogical practices. This tool will specifically analyse interactions between educators and learners in relation to their engagement with IC_w. By focusing on the level and quality of engagement the students demonstrate in the class activity and its relation to IC_w functionings, we can establish the levels at which current pedagogical practices engage with IC_w within the classroom environment. The aim of this tool is to facilitate deeper research into IC_w within the educational space over a longer period of time, and specifically to try and establish the best pedagogical practices for IC_w engagement. The second tool will be an IC_w screening tool designed to be easily used and implemented within education. This will take the form of an IC_w scorecard whereby educators, educational managers, curriculum developers, and HEI directors could screen existing curriculum, assessments, and pedagogical practices for engagement with IC_w and its functionings. This in particular could be used as a self-reflection tool for educators, or a discussion point in the assessment of other educators, assessments or curricula. Both of these tools can be used to help develop more IC_w generating educational practices, which in turn will help student develop IC_w within themselves.

Before presenting these analytical tools, I revisit the assessment principles underwriting the development of the tools.

5.3.1 Theories underwriting the assessment tools

The assessment tools are based on the four guiding theories as discussed in Chapter 2 (section 2.5.2) namely: 1) constructivist learning theory, 2) social cognitive theory, 3) self-efficacy, and 4) contextualisation. They are designed to be formative analytical tools that look to facilitate discussion and engagement from both the assessor and the assessed in order to help improve IC_w engagement in future educational practices.

Both tools require the observer or marker to make judgements about what they are observing. The first tool will be an assessor observing the interactions between lecturer and students within a classroom. The assessor will be focusing how the students engage with the various activities of the lessons with regard to the 9 core functionings of IC_w. The second tool is more flexible and can be used to reflect and assess teaching methods as well as content and assessments. Both require observations by people, and this requires the assessor to construct meaning out of experiences and observations while assigning a valuation to the action or document with respect to the functionings of IC_w. This constructivist action requires cognitive engagement of the assessor with the actions or documents being assessed. To reiterate Zane (2009, p. 82)

> *"… using constructivist theory as a foundation for assessment design suggests a greater emphasis on cognitive processing (versus content topics or visible behaviours) as assessments are designed. This greater emphasis on cognitive processing could then lead to the specification of more robust performance measures and the creation of scoring rubrics that focus more on enduring traits than on content knowledge."*

One of the key aspects to the tools is the focus on the engagement with the nine IC_w competencies across a multitude of behaviours, content, and environments. By engaging the assessor in constructivist actions and thinking through the process of judgement and valuation, the screening of the IC_w engagement levels becomes the beginning of an educated discussion of the assessed scenario. Thus, promoting further engagement with how future behaviours, content and tasks can be made to better promote IC_w.

Social cognitive theory provides a model of the human behaviour that stipulates that human behaviour is the result of a "…dynamic interplay of personal, behavioural, and environmental influences." (Pajares, 2002, para. 2). This is what Bandura (1986, cited in Pajares, 1996) calls triadic reciprocity. This theory provides a solid link between the cognitive process of people and

their actions and behaviours within an environment. In the educational environment the tools can focus directly on the action and decisions made by the students, and so indicate a much clearer link between those actions and the engagement with the functionings of IC_w.

Self-efficacy is the very much the reasons for the formative nature of the tools. Self-efficacy is a judgement of capability that drives human behaviour. Bandura (2006) discusses how a person's belief in their ability to achieve or produce valued attainments is a strong influencer on behaviour and actions. Specifically, the second of the tools is designed enable education-based professionals to empower their behaviour through learning and understanding of IC_w and how alter educational practices towards more engagement with IC_w functionings

> *"Through self-reflection, people make sense of their experiences, explore their own cognitions and self-beliefs, engage in self-evaluation, and alter their thinking and behaviour accordingly."* (Pajares, 2002, para. 13)

Efficacious individuals are better equipped to enforce their will onto different social environments. So, with the use of IC_w function engagement screening – using the second tool – educators, curriculum designers, and educational managers can improve their self-efficacy in relation to IC_w. This would enable educators to reflect on their own practices, and educational managers to help develop their educators towards better IC_w development in their students.

Lastly, the context of the tools is currently aimed within private higher education in South Africa. Thus, the tools are limited at this stage to be used within that realm. Through future, similarly structured research, the concept of IC_w can be expanded or redefined to include all or different levels of education, across a variety of societies, cultures and countries, but that is a recommendation for the future. With these points in mind, I look now at the mechanism of the tools. Both tools require some form of judgement from the assessors, and so in order to improve accuracy and consistency of such judgements, there needs to be common understanding on how to translate observed behaviour into IC_w valuation. For this we need to introduce an external language of description.

5.3.2 External Language of Description

When designing an analytical tool, there needs to be a way in which the concepts and theory can be interpreted by users and utilised effectively. What is required to enhance the validity of the tools is what Basil Bernstein (2000) termed an *external language of description* to help guide

scorers in their judgements and valuations. The external language of description is a method of describing aspects outside of theoretical discourse that it investigates.

> *"Bernstein distinguishes between two qualitatively different languages in theory and research: the language of a theory itself, an internal language of description (describing relations within), and the external language that describes those things outside the theory that it investigates."* (Moore & Muller, 2002, p. 13)

In this study, the concept of IC_w has been framed within the theory of CA which would constitute the internal language of description. An external language of description would be to describe those things that are being investigated, namely, student engagement with IC_w and its functionings. This study requires two steps in the development of its external language. The first is to describe the real, everyday educational actions and activities that would indicate engagement with the functionings of IC_w. The second step is to describe the level of engagement the student has with the educational activity. Table 5.2 below provides the definitions of each of the functionings broken into the three aspects by colour. Moreover, the table provides some educational examples of actions, behaviours and tasks that would indicate engagement with the specific competency.

Table 5. 2 Pedagogical examples of IC competencies

Competency	Definition	Educational Behaviour / Actions examples
Academic Literacy	*the ability of an individual to engage meaningfully with academic material in order to understand new knowledge or concepts, or to develop new behaviours in the solving of problem*	Comprehension exercises, reading journal articles, journal article reviews and discussions, research-based activities such as presentations, discussions on opinions, written reports, etc.
Application of knowledge to the real world	*the ability to successfully integrate and implement theoretical knowledge into overt, practical behaviour*	Explanations of theoretical concepts by students, developing analogies for concepts, production of work based on non-content related principles such as structuring essays, arguments, and actions. Directly linking content to use in situations.
Critical thinking & Problem Solving	*the cognitive thinking process of an individual towards the analysis of problems and the utilising of previous*	Providing problems for students to solve, either individually or in a group, Problem-Based Learning, critical discussion of specific concept, written tasks on utility of concepts.

	experience and knowledge in the creation of solutions	
Stress Management	*the ability of an individual to identify sources of stress and, through the application of successful coping mechanisms, learn to mitigate or minimize the negative impact of stress on the fulfilment of valued functionings*	Dealing with time management, testing with time constraints, prioritising of tasks, deconstructing bigger assignments into smaller sections, facilitated group-based tasks and activities, identification of potential problems in assignments or tasks.
Emotional Management	*the ability to recognize, understand, and use emotional information about oneself or others that leads to or causes effective or superior performance.*	Reflective assignments, Sections of assignments that require how students felt about the tasks, concepts, or findings. Discussion of conflict in teams, classroom debates,
Emotional Protection	*the ability of individuals to protect, cope and deal with negative emotions deriving from workplace events*	Practice constructive criticism of work, lessons and peers. Lesson and activity feedback for both educator and student. Content on dealing with negative emotions, etc.
Teamwork	*the ability of an individual to engage and coordinate effectively with others in order achieve a goal, task or valued functionings.*	Group work both in class and over longer assignments, teacher-lead and student-lead group activities
Communication	*the ability of an individual to clearly communicate ideas, thoughts, feelings and arguments to others in both personal and professional contexts*	Formal communication activities such as presentations, classroom debates, or facilitated group discussion. Informal communication activities such as ice-breakers, student's opinions, question and answer sessions, etc.
Self-development	*The ability to develop themselves to a place where a satisfactory response to a challenge is not only a known possibility, but with practice and time could in fact be a probability.*	Personal journals, growth tracking throughout the course, smaller activities working towards a bigger task, what students learned during the course, lesson or task,

While this table provides some base knowledge on which to make judgements and evaluations, this does not really cover the levels of engagement with the functionings. For this we need the second step – to describe the level of engagement the student has with the educational activity – and it is here that we discuss the concept of engagement.

5.3.3 The concept of Engagement

With the concept of IC_w being developed to include nine core functionings across three aspects, a common term has cropped up repeatedly in the discussion, and that is the concept of engagement. When it comes to evaluating or assessing levels of IC_w, the natural tendency is to discuss the levels of engagement with the nine IC_w functionings. This tendency stems from a logical progression of thought: if a person, activity or document is to be seen as promoting or practicing IC_w, it means they are displaying, activating or engaging in some of, or perhaps all of, the nine IC_w functionings. This logic would then suggest that if a situation only displayed 4 of the nine functionings, then that situation would have a lower IC_w presence or "score" than one that displays 7. While this seems logical and enticing due to its simplicity, there is the issue of effectiveness of engagement with the functionings. For example, if a class of students in one lesson was thoroughly engaged in three IC_w functionings, are they displaying a higher or lower level of IC_w than a class that engages minimally with six IC_w functionings? The answer to this could be open to some debate, however I contend that quality engagement with the IC_w functionings is a non-negotiable requirement for the effective learning and development of an individual's IC_w. This has been a core contention for many years by the South African Survey of Student Engagement (SASSA) that is run out of the University of the Free State.

> *"The SASSE is a survey that gathers comprehensive information from universities relating to high-impact experiences and behaviours identified as having an influence on the teaching and learning experience."* (University of the Free State, n.d.)

For SASSE, engagement is the actions a student and institution takes – their time and energy – to improve education experiences and learning (Universities South Africa, 2018a). Thus, through the experience surveys of nearly 15 000 higher education students, good engagement practices and actions have been identified and used to improve the education environment. This has become increasing valued among higher education institutions.

> *"Many universities are serious about student success and are making impressive gains… this information gives them the tools to fine-tune these efforts."* (Universities South Africa, 2018a)

More than being a prerequisite for IC_w, engagement is also a result of IC_w development. Greater IC_w in people means a greater ability to enact and perform in the valued functionings which all

require levels of engagement. Pati & Kumar (2011, p 264) summarised the benefits of engagement within a working context whereby engaged employees are:

> *"…believed to be fully psychologically present (Kahn 1990), thus ever willing to go that extra mile to achieve success (Schaufeli et al. 2002), thereby making their impact on the business outcomes phenomenal."*

They also discuss how research has statistically related increased engagement levels to desired "organisational constructs as productivity, profitability, employee retention, safety, and customer satisfaction." (Pati & Kumar, 2011, p. 264) Engagement then, is a desired and valued concept when looking to achieve goals and success. Due to this important relationship IC_w, we need to understand what is meant by the term engagement.

In the realms of academia, engagement first started coming into focus during studies into worker burnout. Maslach and Jackson (1981, p. 99) described burnout as a *syndrome of emotional exhaustion and cynicism* that occurs within workers. Maslach and Jackson (1981) conducted research into worker burnout and developed a assessment tool called the Maslach-Burnout Inventory (MBI) that assessed the levels of the initial three dimensions of burnout: emotional exhaustion, depersonalisation and lack of personal accomplishment. After years of research, the MBI developed in three new ways. Initially, burnout was attributed to workers whose job required interaction with people but was later expanded to include all workers. With this change, the three dimensions were altered to exhaustion, cynicism and professional efficacy which allowed for a broader type of worker. And with this development, Maslach and Leiter (1997), (cited in Schaufeli et al., 2002) proposed that while high scores in the three dimensions on the MBI indicated burnout, low scores on the MBI were indicative of engagement. Thus, engagement was positioned as the opposite of burnout and was characterised by energy, involvement, and efficacy.

Since then, engagement has been a matter of discussion and debate as to its relationship with burnout and the characteristics it encompasses. Schaufeli et al., (2002) and then later Schaufeli & Bakker (2004, p. 295) argued that the concept of engagement, while being an antipode of burnout, was a separate, measurable concept with its own three characteristics:

> *"We define engagement as a positive, fulfilling, work-related state of mind that is characterized by vigour, dedication, and absorption (see also Schaufeli, Salanova, Gonzailez-Romai, & Bakker, 2002a). Engagement refers to a persistent and pervasive*

affective-cognitive state that is not focused on any particular object, event, individual, or behavior."

Schaufeli & Bakker (2004, p. 295) go on to explain the three traits of engagement.

> *"Vigor is characterized by high levels of energy and mental resilience while working, the willingness to invest effort in one's work, and persistence also in the face of difficulties."*
>
> *"Dedication is characterized by a sense of significance, enthusiasm, inspiration, pride, and challenge. Vigor and dedication are the direct positive opposites of exhaustion and cynicism, respectively."*
>
> *"The third dimension of engagement is called absorption… Absorption is characterized by being fully concentrated and happily engrossed in one's work, whereby time passes quickly, and one has difficulties with detaching oneself from work. Being fully absorbed in one's work comes close to what has been called 'flow,' a state of optimal experience that is characterized by focused attention, clear mind, mind and body union, effortless concentration, complete control, loss of self-consciousness, distortion of time, and intrinsic."*

I have used this definition of engagement to structure our external language of description when looking to assess engagement with IC_w functionings. Table 5.3 below provides a description of the different levels of engagement with IC_w functionings as well as some educational contexts to help guide an assessor's judgement.

It is also important to note that while vigour and dedication are more overt behaviours that can be viewed and judged fairly easily, absorption may be a little more difficult to identify. The main reason for this is that absorption, as the definition above suggests, does require more sustained time. It is this study's contention that due to the compared difficulty of people to become absorbed in actions this would be a key distinguishing factor between the top level of engagement and a good level of engagement. The table also includes a column with ICSS rating which stands for the Independent Capability Screening Scorecard. The column provides a rating scale for the ICSS which will be explained later in the chapter. With the external language of description identified, I move on to the description and explanation of the proposed analytical tools. The first being the Independent Capability Pedagogical Research Tool (ICPRT) which is based on the conceptual framework of Legitimation Code Theory.

Table 5. 3 Language of description for engagement with IC_w

IC_w	Level of engagement	Description of behaviours	Educational Context Example	IC_wSS Rating
Strong IC_w  Weak IC_w	**Critical engagement (IC_w++)**	Displaying actions with vigour, dedication and absorption when engaging with the IC_w functioning	Student lead discussions, group and individual work where educator facilitates actions	9 & 10
	Invested engagement (IC_w+)	Some actions with vigour and dedication, but less absorption with the IC_w functioning	Teacher-guided activities with student decision making and solution generation	7 & 8
	Interested engagement (IC_w/)	Some actions with vigour, less dedication and less absorption with the IC_w functioning. Some distractions and disengagement displayed	Teacher lead activities with some questions and opinions from the class.	5 & 6
	Partial engagement (IC_w-)	A few actions that demonstrate vigour and dedication, but no absorption. Easily distracted and disengaged.	Teacher lead activities with some effort made to engage the students.	3 & 4
	Passive compliance (IC_w--)	Does what is instructed but no energy of effort put into engaging IC_w functioning. Minimal or no actions with vigour, dedication and absorption.	Teacher lead lecture with little to no feedback from students. Instructions are given and followed with minimal effort.	1 & 2

5.3.4 Legitimation Code Theory

Legitimation Code Theory (LCT) is a conceptual framework developed by Karl Maton (2014a). It first emerged in the 1990s but has since been developed to become a framework that has been adopted and embraced across a variety of disciplines including education. Maton (2014a) describes LCT a*s:*

> *"a conceptual framework… that enables knowledge practices to be seen, their organising principles to be conceptualised, and their effects to be explored."*

In his book *Knowledge and Knowers: towards a realist sociology of education,* Karl Maton (2014a) discusses the existence of a *"knowledge paradox"* whereby the importance of knowledge has become immense in modern society, yet the understanding of knowledge has been dismissed and undervalued. Terms such as the "information age" and "postmodernity" are used to describe the current era of human development which describe how having and gaining knowledge has become a more open and global event. Through the invention of the internet, mobile technology and social media, people have access to more knowledge than ever before, however, the paradox is that having access to knowledge does not mean that people understand the knowledge. This leads to people acting, discussing and arguing aspects of knowledge without understanding its context, the organising principles that underwrite it, and the various levels of meaning attached to it. For Maton (2014a), knowledge is a highly influencing aspect of modern society and is used continually to define, categorise and explain actions, behaviours and events within human society. The problem is that society tends to conceptualise knowledge an isolated good used for trade of power, much like money. This very much makes knowledge a superficial commodity of living, rather than the deeper understanding of conceptual interactions.

> *"Knowledge is described as a defining feature of modern societies, but what the knowledge is, its forms and its effects, are not part of the analysis. Instead, knowledge is treated as having no inner structures with properties, powers and tendencies of their own, as if all forms of knowledge are identical, homogenous and neutral."* (Maton, 2014a)

LCT is a framework that has been designed to contribute towards lessening the knowledge paradox by providing an analytical toolkit to help deepen understanding of concepts and how they behave and interact with each other to form stronger knowledge. This framework has been used to bring to light the organising principles or *legitimation codes* of knowledge practices across a variety of different disciplines. In practice, LCT structures sets of concepts termed *"dimensions"* that

> *"...each explore a different set of organizing principles underlying practices, dispositions and contexts as a species of legitimation code."* (Maton, 2018a)

LCT aims to get at the

> *"genetic codes of practice, in order to reveal the fundamental 'rules of the game' or basis of achievement ('legitimation') of contexts, the way they develop over time, what they enable or constrain, and how they relate to the dispositions actors bring to those contexts."* (Van Krieken et al., 2017)

Thus far there have been three dimensions that have been developed, researched and extrapolated, namely: Specialisation, Semantics, and Autonomy, with others currently being developed across a variety of disciplines. The LCT dimension of Semantics offers a slightly different model of analysis than the other two dimensions whereby it analyses a continuum of instances over time in order to create a "code" of how people enact the concepts of semantic gravity and sematic density. It is this model on which I base the ICPRT.

According to the LCT website developed by Karl Maton and his team, the dimension of semantics explores:

> *"…the context-dependence and complexity of practices, dispositions and contexts. It conceives of practices as semantic structures whose organizing principles can be explored in terms of semantic gravity (context-dependence) and semantic density (complexity). These two concepts can be enacted either separately or together to explore semantic codes."* (Maton, 2018b)

To illustrate an example of how LCT analyses semantics practices, I take the example of *semantic gravity.* Semantic gravity is a concept that looks at the level to which knowledge is contextualised. If the understanding and meaning of the word is strongly linked to the context in which it is used, then the word is said to have a strong semantic gravity. If the word or term is more generalised and not dependent on context to establish meaning then it is said to have weak semantic gravity.

> *"Semantic gravity (SG) refers to the degree to which meaning relates to its context and may be stronger (+) or weaker (–) along a continuum of strengths. The stronger the semantic gravity (SG+), the more meaning is dependent on its context; the weaker the semantic gravity (SG–), the less dependent meaning is on its context."* (Maton, 2014b, p. 182)

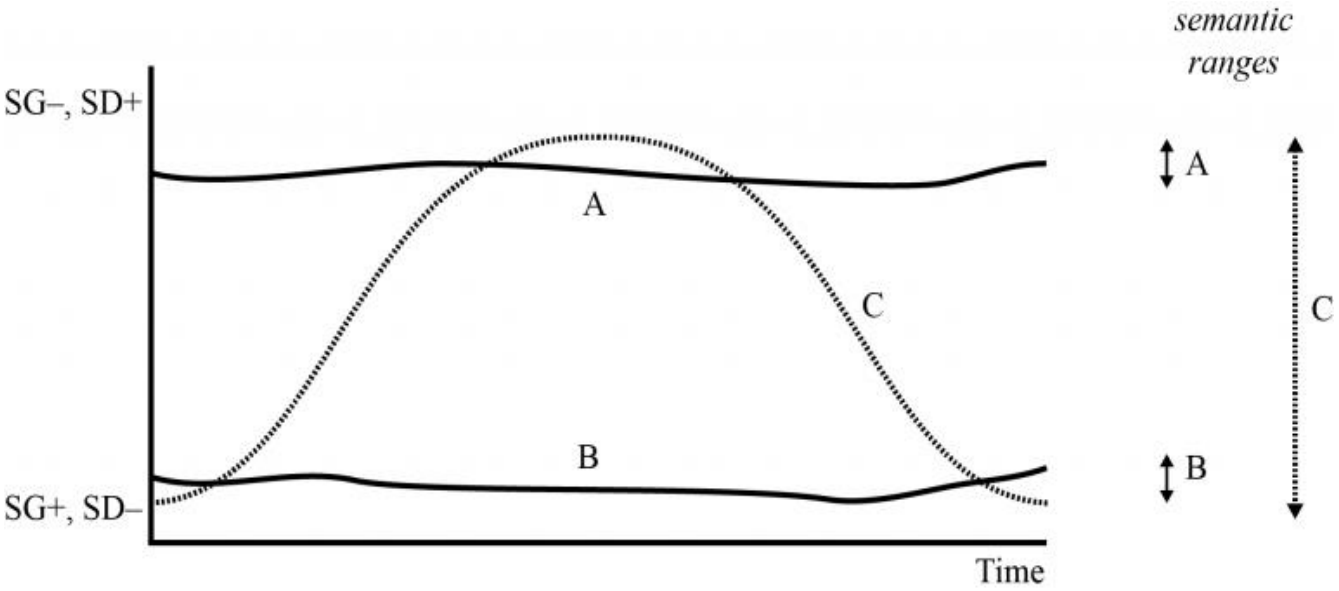

Figure 5. 1 Semantic profiles and ranges

Reprinted from: Maton, K. (2018b).*Semantics.* https://legitimationcodetheory.com/theory/semantics/

In the education context, an example would be that the concept of formative assessment has a stronger sematic gravity than that of school reports. Formative assessment has distinct, contextualised meaning in educational assessment discourse, while school reports are a more generalised understanding of education and assessment. Likewise, school reports have a stronger semantic gravity than the concept of teaching in that school reports are contextualised to a formalized school environment, whereby teaching can happen in both formal and informal settings in all aspects of life. By observing a teacher presenting a lesson, LCT provides a framework for plotting how often the teacher utilises concepts that have stronger or weaker semantic gravity. Moreover, when observing these instances over time, LCT illustrates patterns of movement between strong and weak semantic gravity. Maton (Maton, 2017) refers to the behaviour of starting with an SG+ concept and then moving through dialogue toward more SG- concepts, which would indicate a *weakening* semantic gravity. The opposite would result in a *strengthening* semantic gravity pattern. Through continuous studies, LCT research has produced various graphical patterns which indicate different variations on how teachers move between various semantic gravity levels over time. Figure 5.1 (p.159) shows some of these patterns that include the “high semantic flatline” and “low semantic flatline” which indicate small Semantic Gravity ranges (A and B) as well as a dynamic “semantic wave” that has a high range (C) (Maton, 2018b; Maton, 2017).

Through research, patterns of behaviour such as the ones in Figure 5.2 below (p. 161) provide insight into the current practices of educators. These patterns can then be used to explain problematic practices, potential issues, or conversely, highly effective practices. In his key note presentation at the British Association of Lecturers in English for Academic Purposes Conference (2017), Maton shows and explains other patterns that have been uncovered using the LCT semantic gravity framework. One in particular profile showed that some educators work almost exclusively with a strengthening semantic gravity method. In other words, educators would introduce content specific terminology or concepts (SG-) and then simplified and unpacked those concepts with more concrete, everyday terminology and examples (SG+) that would allow the student to get a better understanding. While this seems quite logical and in line with good teaching practice, what it did highlight was that the educators didn't reverse this process (moving from SG+ to SG-) which became problematic when student were asked to explain the required, complex concepts.

It is findings such as this that the LCT framework can help uncover IC_w levels within the classroom. Utilising this analytical model of LCT, the IC_w research tool can specifically focus on identifying IC_w engaging patterns within pedagogical practices.

5.3.5 The Pedagogical Research Tool (PRT) for IC_w

In essence, the IC_w LCT Research Tool will work exactly the same in practice as the Semantics domain provided by Maton but with the focus on the student engagement with IC_w functionings within the educational lesson. This would take the form of an observer attending a lesson or series of lessons and indicating instances of observed student engagement and indicating the quality of engagement from levels stipulated in Table 5.3. This would move along the levels provided in Table 5.3, moving from strong IC_w engagement (IC_w ++) to weak IC_w engagement (IC_w --) tracked over time. In this way, an observer could map out instances of engagement with IC_w over the lesson or lecture time frame. This would utilize the same mapping cartesian plane where the x-axis would be time, while the y-axis would contain the levels of IC_w engagement. Figure 5.2 below provides an example of what this may look like in practice.

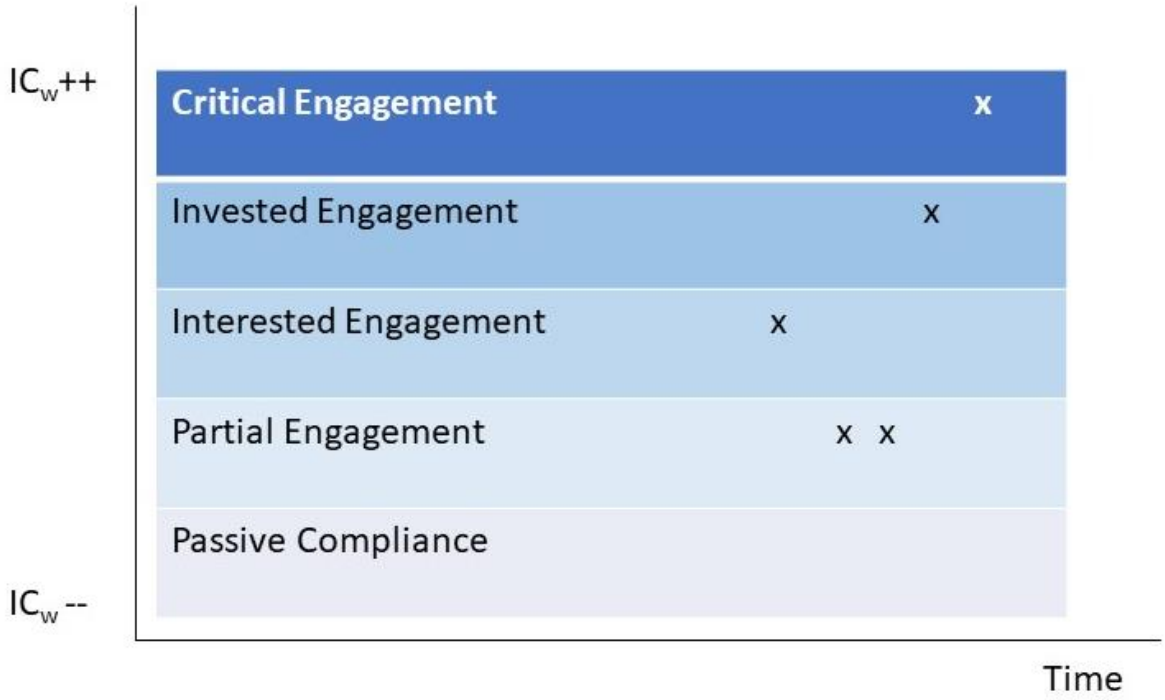

Figure 5. 2 Example of the PRT

The observer would indicate instances within the ranges of IC_w engagement over the period of the lessons, series of lessons or even over an entire curriculum. Using the external language of description of IC_w engagement (Table 5.3), assessors would observe the pedagogical practices, make judgements as to the level of IC_w engagement in those practices, and subsequently map out the behaviours over the assessed period. By recording instances of IC_w engagement, quality of that engagement, and the activity that resulted in that engagement, over a prolonged period of sustained research, patterns would begin to emerge of how educators are currently engaging students in IC_w as well as comprising a list of high IC_w engaging practices. This then will help deepen our understanding of IC_w engagement within pedagogical practices and form the basis of potential next steps to improve IC_w development in education.

The weakness of this assessment tool is that it would require some knowledge and insight into the concept of IC_w and its functionings. Due to the qualitative nature of the tool, the judgement of the observer is of utmost importance when it comes to assessing event and instances. Moreover, the observer would have to understand the principles of LCT as a framework in order to interpret the patterns that arise. Thus, this specific assessment tool is very much aimed at higher level of

analysis to provide further research into IC_w and its operationalisation into education, specifically starting in PHEIs in South Africa. Let us now move to the second analytical tool.

5.3.4 IC_w Screening Scorecard

The concept of a screening tool is born out of the problem of operationalisation. As discussed in the Chapter 2 (in section 2.2.2 Criticisms of Capability Approach) one of the major issues with Sen's conceptualisation of the Capabilities Approach (CA) is the operationalisation of the concept into practical reality. Comin (2001) gave three reasons for this. Firstly, the problem of data collection to find viable, valued functionings of society is highly problematic logistically. The second is the paradox that aggregation of those valued functions findings would be required in order to implement into society, whereas Sen's CA embraces pluralism and diversity. The paradox is that in order to operationalise CA, it would require moving away or leaving the theoretical principles of the concept. And lastly, the third problem is that of consensus. CA implemented into a society would require some functionings to be valued collectively above others, thus moving away from some individual highly valued functionings.

One of the key principles of the development of IC_w as a concept was to help create another pathway towards operationalising CA within education. IC_w is a critical functioning of achievement in the capability of work. By developing the 9 core functionings of IC_w, educators, students and curriculum developers have a more concrete concept on which to bring CA into education. It is for this reason that the IC_w Screening Scorecard is being proposed. While the research focused analysis tool can help deepen and expand understanding of IC_w into the future, the IC_w Screening Scorecard can be implemented quite easily in order to help educators on the ground start engaging with the concept. The goal of this analytical tool is not to be intricate, or even entirely accurate, but rather to give educators a guide to help make more IC_w related decisions when it comes to producing curricula, lesson plans, pedagogical practices, and setting assessments. The scorecard requires the administrator to make judgements about the content or behaviours they are observing in relation to the level of engagement with IC_w and its functionings (these levels are described in Table 5.3). They are then required to assign a numerical value to the activity, lesson, document or content for each of the nine functionings of IC_w. Upon completion of the observation or document/task analysis, the final score will be totalled to illustrate the level of IC_w engagement within the assessed context. Table 5.4 below show the basic outlie of the scorecard.

Table 5. 4 Example of the IC_w Screening Scorecard

IC_w Aspect	ICw Functioning	Rating of item engagement with IC_w functioning									
		1	2	3	4	5	6	7	8	9	10
		Passive		Partial		Interested		Invested		Critical	
Cognitive	Academic Literacy										
	Application of knowledge to the real world										
	Critical thinking & Problem Solving										
								SubTotal [30]			
Emotional	Stress Management										
	Emotional Management										
	Emotional Protection										
								SubTotal [30]			
Professional Traits	Teamwork										
	Communication										
	Self-development										
								SubTotal [30]			
								TOTAL [90]			

In terms of scoring, the classic, numerical 1 to 10 rating system is something that is familiar to many. A rating of 1 on the scale indicates the poorest or weakest level of engagement with the given IC_w functioning, while a score of 10 would indicate an excellent or extremely strong engagement with the given functioning. While this evaluation system is quite common, it is also rather vague and general. By utilising the external language of description in Tables 5.2 and 5.3 educators have far more specificity and guidance in the implementation of the scorecard. In Table 5.3 specifically, detail is given in the column marked IC_wSS Rating.

Through the use of these assessment tools, educational practices that induce quality engagement with the functionings of IC_w. can be revealed and recorded. Over time this catalogue of IC_w engaging practices can be collated and utilised to form a platform for real educational change toward IC_w development in higher education students. They also promote educational discussion and awareness on IC_w to help further its impact on educational practices.

5.4 Additional Findings from the study

There were some other findings that arose from the research that did not quite fall into the addressing of the research question or objectives of the study. This section will address some of the more interesting findings in order to broaden the scope of discussion of IC_w within education.

5.4.1 Articulation Gaps

As discussed in the Chapter 4, one of the findings that came out of the interviews was the concept of *articulation gaps* between the end of secondary school and tertiary education. Essentially this refers to the perceived "gap" in student ability between the completion of secondary schooling and the first year of their tertiary/higher education studies. In South Africa, this concept is commonplace within educational discourse when discussing student performance.

> *"In relation to the underperformance of undergraduate students, the level of preparation of first-year students for university studies has long been a concern, with the interface between school and higher education often characterised in terms of a discontinuity or 'articulation gap'."* (Case et al., 2013)

The articulation gap experienced in South African education is centred around the levels of preparation matric students are getting in order to take on the challenges of higher education, with specific focus on the content, quality and standards of the National Senior Certificate (NSC) which is then used as a benchmark for entrance into Higher Education Institutions (HEIs) and qualifications by the Department of Higher Education. There are many proposed reasons for the presence of the articulation gap ranging from educational based issues such as decreasing pass requirements, poor quality education and even curriculum and content disjunction between secondary school and higher education (Malatji & Singh, 2018), to broader socio-economic issues such as poverty, impacts of institutionalised racial discrimination, and poor economic performance. These issues are being researched and discussed throughout South African education at a variety of levels across a multitude of contexts. All though agree that the articulation gap is a significant problem for producing quality, higher education graduates.

> *"Underpreparedness manifests itself in a range of ways, from struggling in the formal curriculum to difficulty with adjusting to independent study and a university environment. It takes different forms in different subject areas but the common feature in all settings is that what the students know and can do – attainments that were good enough to gain*

them entry to higher education – do not match the expectations of the institution" (Council on Higher Education, 2013, p. 57)

In the discussions during the interviews, the articulation gap was brought up around the question of student preparedness for tertiary education. The resounding consensus was that students were not prepared for higher education however the perspectives of the articulation gap were slightly different in a few instances. Through the analysis of the interviews four types of articulation gaps were discussed or alluded to by the interviewees, namely, technological, independence, expectations and academic.

The academic articulation gap refers to academic ability of the student, in that the academic results of the students were considered poor and thus affected their performance in their first year of tertiary study. There was also mention towards a lack of – what the PHEI representatives referred to as – basic or fundamental knowledge or academic abilities such as reading, writing in English and mathematics, as well as a misalignment with some qualification specific content. For example, a student who has enrolled in a Bachelor of Business Administration but has not taken business management as a subject in secondary school would lack the terminology and context of some content when challenging their business centred qualification.

The technological gap referred to the fact that there is still a high percentage of students who struggle utilising and accessing technology associated with tertiary education. The use of computers and document software to produce assignments, digital communication through emails and online Learner Management Software (LMS), even the ability to use the internet to find information are all expected at tertiary level, not only from the institution's campus, but from the student's residence as well. While there are obvious reasons for having such expectations, in South Africa only 62% of the population are able to access the internet, while the vast majority of internet users (73.4%) are accessing internet through their mobile phones (Kemp, 2020). This is problematic when students are expected to produce documents and work on projects using laptops, desktops and tablets. The technological gap even seems to be getting worse as *Digital 2020: South Africa* statistics indicate a decrease in desktop and laptop usage by 24% between December 2018 and December 2019 (Kemp, 2020). However, it is worth noting that the Covid19 pandemic is forcing students and institutions into more online, digital content and lessons which could improve the usage of desktops and laptops in the future.

The expectations gap, in the case of the interviews in this study, referred mainly to the expectations and requirements placed on students by HEIs with regards to the amount of work,

effort and learning time. Students coming into higher education struggled to adapt to the new schooling environment in terms of a less classroom-based learning and a more independent, group or tutorial-based learning system. Moreover, in certain cases where interaction with industry through practicals or internships were concerned, there was a palpable discrepancy between what students expected in terms of tasks, responsibility and working hours and what the working world demanded.

The final articulation gap was that of independence which was, for fairly obvious reasons, of the most interest to the study. The independence articulation gap referred to how students managed their studies, behaviour and essentially their lives within the new, less restrictive environment on higher education. The term *spoon-fed* was used to describe how secondary school students required very little effort in order to obtain information and direction, whereas in higher education research, extra reading, and work outside of lectures and classroom is both expected and necessary for success. The discussion of this gap seemed to emphasise the concept of Dependent Capability in that students were capable of achieving some form of academic success only if the information, direction and clear instructions were presented to them prior to any kind of assessment. Students struggled when asked to read or research topics for themselves, or even make and justify decisions independently. From the interviews, it was also clear that this gap did not only focus on academic contexts but also on the management of their lives and behaviours such as time-management and action prioritization.

These gaps offer some interesting dialogue when looking to improve the quality of higher education graduates. If the gaps discussed here could continue to be investigated, it could very well help develop some simple, practical interventions that could aid and support students entering higher education. In the case of the independence gap, perhaps the development and inclusion of more IC_w promoting curriculum at secondary/high school level could help address the problem.

5.4.2 Educational Process vs Educational Substance Discourse

The second of the findings that arose adjacently during the research was the different ways that some of the participant PHEI representatives talked about their students, their institutions and education as a whole. It stemmed from an observation around the question of warning signs that

indicated a struggling student in the institution. While the majority of the interviewees discussed warning signs from a behavioural or individual perspective, three of the educators placed a lot of emphasis on the academic results of the students as initial warning signs. This prompted a deeper look into their other discussions and responses and a clear distinction started to appear. The three participant PHEI representatives that emphasised academic results as initial warning signs utilised very business-based, systematic and process orientated discourse in their responses. This included increased use of acronyms, educational buzz words and terminology in their discussion. This type of discourse was labelled as *Educational Process discourse* (see Chapter 4). In comparison to this, the remaining six PHEI representatives tended to focus on more the interactions between the students and the curriculum. They used more personal language and individual examples to explain behaviour and engagement of the students with content, teaching methods and their peers. This was then termed as *Educational Substance discourse*.

The reason why this difference in discourse between PHEI representatives seemed noteworthy is the link between discourse and identity. Jones (2018) defines discourse as a sub-field of linguistics – the study of language, but goes on to say that it is more than just the study of words.

> *"But discourse… is not just the study of language, but a way of looking at language that focusses on how people use it in real life to do things like joke and argue and persuade and flirt, and to show that they are certain kinds of people or belong to a certain group"* (Jones, 2018, p. 2)

The key aspects of this is that the way in which we discuss topics, the language and phrasing that we use, indicates the type of individual and social identity that we identify with.

> *"The way we use language is inseparable from who we are and the different social groups to which we belong".* (Jones, 2018, p. 2)

This means that the two difference types of discourse – Educational Process and Educational Substance – identified in the interviews, very much indicates a different approach to or perspective of education. Educational Process discourse would seem to indicate that the person views education from a macro perspective that sees educational institutions as a system that produces educational products i.e. graduates. They would value statistics such a pass rates and throughput rates, number of distinctions and educational standards. This is an obvious reality in the PHEI industry as private institutions are businesses that require financial sustainability and so this type of discourse can be quite useful and appropriate in the management of a PHEI. The

downside is that this removes focus on the development of individuals which – at least from an educational purist perspective – is the key priority of education. This kind of discourse would also link strongly with the development of Dependent Capability, whereby students are given numerous and precise instructions, schedules, deadlines and requirements in order to complete the programme and thus graduate. Educators taking a systematic perspective of education would value the provision of knowledge and skills that would ensure a passing grade. While this may sound logical and fundamentally good, as discussed in this study, the focus on passing tests develops the Dependent Capability of students and limits IC development.

This is quite different from those using Educational Substance discourse. This type of discourse seems to indicate that the person takes a more micro perspective of education that looks at the academic and personal development of individuals or groups of students. They are more concerned with the behaviours of the student in relation to the work, but also in relation to their peers, the faculty and the institution itself. It would suggest that the person is also interested in topics such as learning theory, different pedagogical methods, and social development – really the substance of education. This type of discourse appears to align more with the ideals of IC in that it values the development of the student to achieve. Not necessarily by passing tests, but rather to achieve at what they value. In CA terms, this implies improving their ability to enact their valued functionings. Focussing on how learners learn and how best to get them to learn, educators are looking to develop the ability of the learner to take ownership of, and responsibility for, their own learning. This very much aligns with the conceptualisation of general IC and the work-focused IC_w.

While the focus of this study was on the establishment and assessment of IC_w, this finding could be of interest to further research and investigation. An example could be, with a more established and broader understanding of IC_w, an investigation into how these types of discourse engage with IC_w at various levels of education. Another could be analysing the discourse of current South African educators to establish what discourses is being used and therefore transmitted to the students. Both of which could in the betterment of analysing and potentially improving the quality of South African education.

5.5 Conclusion

This chapter has discussed the findings of the study in three broad areas. The first was to address the first of the objectives of the study and research questions by establishing a more detailed, comprehensive conceptualisation of IC_w within a South African PHEI context. This was done in the identification of the 9 core functionings of IC_w within the three aspects of Personal/Professional Traits, Cognitive processing, and Emotion. The second part was the development of 2 assessment tools to help assess IC_w engagement levels in an education context. This was discussed and developed through the findings of the study and two assessments were proposed in the IC_w Pedagogical Research Tool and the IC_w Screening Scorecard. In order to make these analytical tools functional, an external language of description was developed and provided.

The third area was the discussion of two other adjacent findings that arose from the research which were unintended but revealed the complexities of improving or changing education and produced enough interest to be discussed further. The next section will look to formally address the research questions of the study, provide some reflection on the research process itself, and provide a conclusion to the study.

Chapter 6 – Conclusion

6.1 Introduction

The final chapter of this study will look to directly address and answer the two research questions posed in Chapter 1. This aims bring together the findings and discussion of the research and set it firmly in the context of the Capabilities Approach (CA). The chapter will then go on to provide some recommendations as to how these findings could be taken further to help improve the engagement of IC_w within educational practices to improve the quality of higher education graduates in South Africa, and potentially the quality of South African education as a whole.

Following this, there will be a reflective section detailing the personal experience of myself – the researcher – in relation to a variety of aspects concerning the process of the study. Through the four years of designing, developing and implementing the research study, there has been real and powerful growth and learning from my perspective. These changes of perspective and opinion have helped shape the study throughout the process and as such, it is imperative that my personal thoughts, biases, perspectives and values are discussed for the purposes of academic clarity. Finally, this chapter will offer an overall conclusion for the study.

6.2 Answering of Research Questions

6.2.1 What are the competencies/functionings that constitute IC_w as a concept in the South African private higher education context?

This study started with a very simplistic definition of a concept called Independent Capability (IC) given by Stephenson (2012). Their definition said that IC was the ability of an individual to manage and deal with situations and problems that are unfamiliar to them. They gave this definition in contrast to the concept of Dependent Capability (DC) which is the ability to deal and manage problems and situations that are familiar. The concept seemed simple but the ramifications for producing high-functioning, highly capable graduates in South African education seemed quite

valuable. In reviewing some of the data provided on confidence in South African higher education graduates, as well as numerous articles on the quality of South African education, this simplistic concept of IC seemed to have the potential to provide insight on some possible solutions. The key issue the study focusses on is the decreasing confidence South African employers have in the quality of graduates and the apparent high level of skills mismatch between graduates and the requirements of the labour market. To this end, the first objective of the study was to develop a more detailed and specific conceptualisation of IC that was specific to improving the ability of graduates to succeed faster and to higher levels when entering the labour market. This was termed Independent Capability for Work (IC_w) and was positioned as a critical functioning in achievement in the capability of work.

In this undertaking, some of the first questions that came to mind included: how does one show or demonstrate IC_w? What constitutes unfamiliar? And what are the actions or behaviours that would suggest someone has more IC_w than someone else? These questions and many others seemed to point towards one particular problem, and that was how IC_w could be understood within the realms of individual behaviour. IC_w as a concept is quite abstract and theoretical in nature and so in order to develop it to something more concrete, more substantial, we needed to add a physical or reality dimension to it. Thus, coming to the question of what are the actions, behaviours, values that individuals show to demonstrate IC_w? This then brought me to the concept of competencies and functionings and the first research question.

The answer to this question has been addressed a number of times throughout the study. The contention of the paper is that in the analysis of IC_w, it appeared to have three broad elements to it. A cognitive aspect due to the requirement of solving problems in unfamiliar contexts. An emotional aspect from the need of confidence, motivation, and self-discipline to challenge the unknown problems, and lastly a personal or professional element that demonstrated competence in the required task. Through the review of literature, the cognitive aspect was explored with Sternberg's Successful Intelligence theory (Sternberg, 2005), while the emotional aspect was centred around the concept of Emotional Intelligence (Boyatzis et al., 2015; Cherniss, 2000; Schutte & Loi, 2014). Both of these provided some foundational theory and research from which we could start identifying the functionings that may constitute IC_w. The research was then used to help identify the personal/professional competencies that are valued by PHEIs whose very job is to develop capable professionals for their particular industries. Moreover, the insight from the students of the participant PHEIs help enrich the understanding of the valued work-based

functionings. Figure 6.1 illustrates the aspects and functionings that comprise our developed conceptualisation of IC_w.

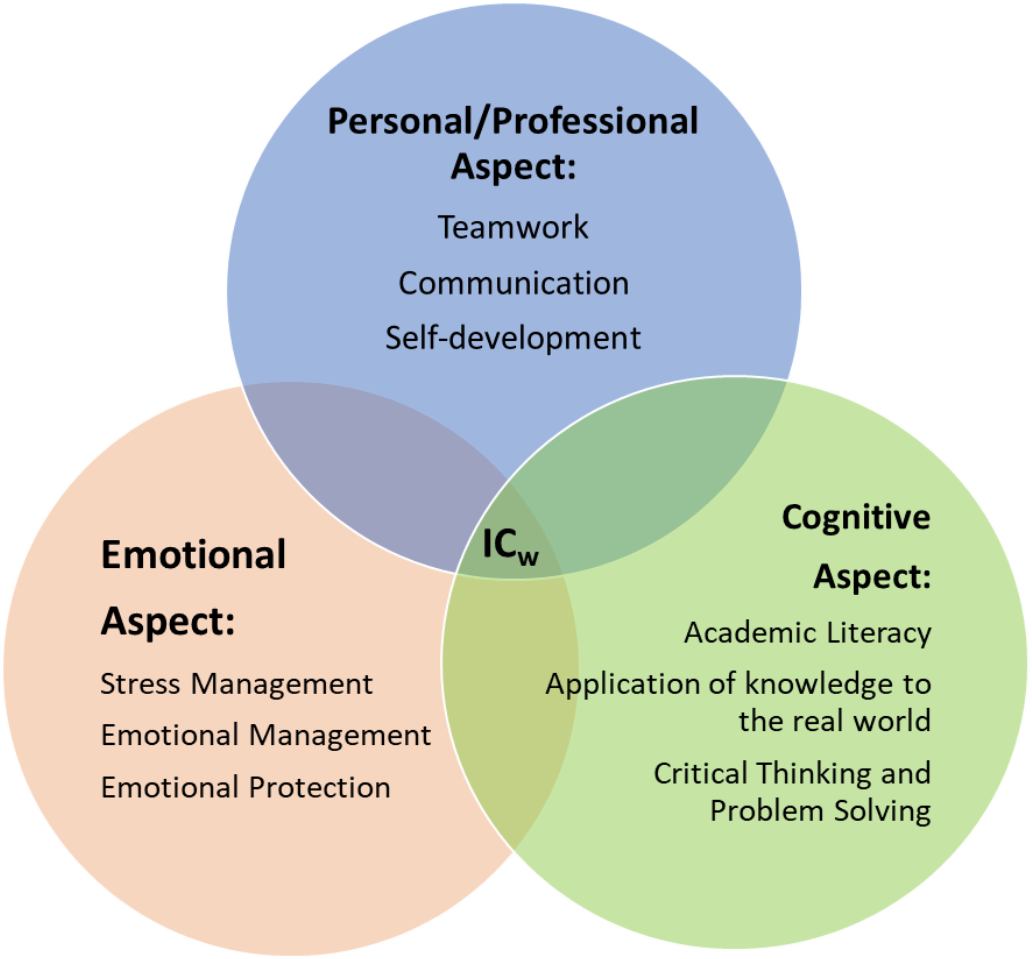

Figure 6. 1 Mapping of core functionings of Independent Capability for Work

With the functionings of IC_w provided, there is a much stronger, more tangible way in which IC_w can be researched, implemented and explored through education. Moreover, it adds to the growing body of research and application of CA to education. This study adopted the conceptual framework of CA in order to view the problem of low confidence and perceived poor quality in South African higher education graduates. CA has numerous impacts on social policy development, conceptualisations of what social justice and leadership should prioritize, and many other aspects of society. For CA, education is a vital component in people being able to achieve their valued functionings, and the conceptualisation of IC_w provides another pathway for instilling the principles of CA within education.

This study contends that in order to improve and individual's ability to enact work-based functionings in order to achieve in the capability of work, they need to be able to enact and integrate the 9 core, work-based functionings presented in this study. If we accept, as argued in chapter 1 and stipulated by Stephenson (2012), that current the current educational system focuses primarily on developing DC which limits preparation for entering the unfamiliar world of work, then through the development of IC_w as a concept and then IC_w-enriching educational practices, students will be better equipped and prepared to deal with the unfamiliar problems in the unfamiliar work environment.

6.2.2 How can we assess the levels of IC_w engagement within education?

With a more substantive and developed conceptualisation of IC_w and the functionings of which it is comprised, the next question was how IC_w engagement in education could be assessed. This question seemed fairly straight forward at the beginning of the study, but as the research progressed, it became clear that this was more complex than anticipated.

Initially, at the conceptualising stage of this study, the focus of an IC_w assessment tool was on the presence of IC within an individual. This was a logical step in the thought process: IC_w is a concept that looks at the enacting and integration of work-based functionings that are critical to achievement in the capability of work, so an assessment of IC_w would surely require the focus on individual performance in the IC_w functionings. There are, of course, similar concepts that measure individual performance in identified competencies that set a precedence for this study. Concepts such as Intelligence Quotient (IQ) and Emotional Intelligence Quotient (EQ) have been around for decades and thus provided a foundation for an initial assessment conceptualisation.

However, through the early review of literature, the naivety of my initial thoughts on assessment became profoundly clear. IQ and EQ are what they are today because of the decades of academic rigour, discussion, development and contributions. They have both had numerous and substantial research over generations to help design assessments that are complex, accurate and meaningful. Having just conceptualised IC_w and defined its functionings, the task of developing a similar style of assessment with none of the data, academic support or contributions to developing the concept, was impossible. At least, at this stage of the concept's development. And so, the

scope and scale of the IC_w assessment tools had to be reformed, refocused and narrowed to provide a starting point for engagement with IC_w in education.

With the shift of focus from individual to education, a paradigm shift was necessary as well as another reality check in terms of complexity. Assessment in education has a long and developed academic progression and is widely researched in education academia. This provided a great foundation for the development of the IC_w assessment tools, but again the scope of the tool needed to be more specific. As discussed in chapter 5, the construction of a universal IC_w analytical or assessment tool at this stage of the concept's life is somewhat impossible. Having a universal assessment tool that can be used in all three domains of education (curriculum, pedagogy, assessment) and be detailed enough to provide accurate results is far beyond the scope of this study.

The decision was then made to provide two assessment tools to be utilised in different ways to facilitate the start of research into IC_w within education. The first is an assessment tool that allowed for the IC_w engagement to be assessed within pedagogical practices. This was termed the IC_w Pedagogical Research Tool (PRT) and was based on the conceptual framework of Legitimation Code Theory (LCT). Using the PRT, IC_w researchers can start to derive the real-world practices of how educators engage IC_w within their teaching. By identifying teaching activities that are engaging one or more of the 9 functionings of IC_w, and then assessing the level or quality of that engagement, a researcher could start mapping out patterns of IC_w engagement that could then provide insight into current and/or effective levels of IC_w generation within a pedagogical context. Chapter 5 explains the PRT in detail, how it works and how it utilises the LCT framework.

While the PRT provided a pathway for IC_w development and research into the future, the limit of the assessment is that it would require an assessor that has and a deeper understanding of IC_w and LCT, as well as some experience in the judgement of behaviours that indicate IC_w engagement. This challenge on operationalising IC_w more quickly into education was looked to be addressed by the second assessment tool: The IC_w Screening Scorecard (IC_wSS). The IC_wSS was designed to be immediately usable by educators. It offers educators a means of assessing IC_w engagement across all educational content, practices, tasks and assessments. The level of depth and accuracy with the IC_wSS is far less rigorous than that of the PRT, but the main goal is to provide educators with a cursory understanding of how they engage IC_w functionings in their current educational practices and behaviours. The IC_wSS requires the assessor to give an engagement rating (from 1 – 10) for each of the nine IC_w functionings. The higher the score (to a

maximum of 90) the more IC_w positive the practice is and vice-versa. This can be done with textbooks, written or classroom activities, lessons, any educational aspect they wish. The idea is that by screening their educational practices, educators can become more aware of how to develop IC_w in their students. Again, Chapter 5 explains how the IC_wSS works, and provides an example of the scorecard in Table 5.4.

For both of the assessment tools, there was one key issue with regards to implementation and that was that of assessor judgement. Both of the tools require the assessor to observe or reflect on actions and then evaluate the level of IC_w engagement associated with those actions. This could be problematic due the variation in individual perspectives and knowledge of IC_w. In order to help solve this issue, we created an external language of description that helps translate observations into IC_w valuations. The first step was to align examples with each of the nine IC_w functionings to provide a starting point (see Table 5.2). The second step was more complex. As discussed in chapter 5, the issue of valuating the integration of nine functionings within actions is far more nuanced. From a purely numeric perspective, an activity engaging 4 of the IC_w functionings is less than those that engage with 6. This is a fallacy of thought in that the assessment is about how well an activity engages students with IC_w which, by its' very nature, is a measure of the integration of the competencies. To resolve this fallacy, the external language of description focused on providing five levels of engagement starting with partial engagement through to critical engagement. This is summarised in Table 5.3 which helps align observations and IC_w engagement valuations.

This study has proposed two assessment tools that can assess IC_w engagement in education. The PRT provides a research focused approach to guide IC_w development as an academic concept as well as provide more detailed data on pedagogical practices in education. The IC_wSS provides IC_w with an entry into current education contexts by raising awareness of the concept and allowing educators to reflect on their own practices, institutions to assess their curriculum, and students to help improve their own IC_w development. The next step in the development of these tools would be to run pilot testing programmes to establish viability and to generate initial data points for examination and further integration into educational discourse and practice.

6.3 Significance of the findings

The findings of this study have provided some keen insight into the discussion of education in South Africa. It originally set out to provide a means to address the lack of confidence or perceived poor quality of the South African higher education graduates, but in doing so has posed some questions and provided some aspects that could help education in a number of ways.

First and foremost, the development of the concept of IC_w has provided a new concept on which to base educational research, discussion and practice. By establishing the nine functionings of IC_w there is now a clear and tangible link between theory and educational practice. By focusing on and integrating the nine functionings into educational practice, students have a much greater chance of being able to improve their IC_w level and thus be better prepared for solving unfamiliar problems in the unfamiliar environment of work.

Another finding that came from the research was the high value students placed on emotional competencies in relation to success in their careers, as well as that emotional competency development was de-prioritised by all of the participant institutions. This offers insight into how institutions can make some changes to better engage with their students. From this finding, it would seem that students would respond very positively to institutions who are willing to develop more emotional competency-based activities or events, which could lead to higher IC engagement and development and thus, better prepared students.

The third significant contribution are the initial assessment tools for IC_w in education. The IC_wSS is a tool that can be used and implemented in institutions almost immediately. With a small introduction to the concept and induction into how to utilise the IC_wSS, educators, institutions and even students can immediately engage with IC_w in their educational practices. The PRT combined with the well-established LCT academic network offers a pathway to deeper research into pedagogy in South African teaching. Through the PRT, there is now a method of assessing pedagogical practice in a substantive and meaningful way that will start revealing the patterns of practice that are shaping South African education and students.

The next significant contribution is to the philosophy of the Capabilities Approach (CA). As discussed in chapter 2, CA has strong values and arguments for a more humanistic approach to human development and has already provided contributions to improving education both globally and in South Africa. IC_w adds to this discourse by providing a new concept on which to help guide

pedagogical practice towards improving the ability of graduates to enact their valued functionings in the capability of work.

The last contributions come from the additional findings of the study. While there is already significant research being conducted on articulation gaps and how to close them, this study has offered a nuanced perspective on different types of articulation gaps. This could help narrow the scope of focus when looking at understanding exactly how the articulation gaps exist and how they are being perpetuated. The findings on the two types of educational discourse can also add value to educational research, specifically within the realms of a CA perspective. The type of discourse educators use can have significant impact on the development of their students. This concept is termed the hidden curriculum (Semper & Blasco, 2018) and explains that educators as people will invariably impart some of their characteristics, values, and attitudes onto their students. If educators are aware of their type of discourse – the way they talk about their subject, learning and education – they are better positioned to either lessen the impact of the hidden curriculum, or at least intentionally shape it towards a more positive nature.

6.4 Recommendations

This study has provided a more detailed and more structured conceptualisation of IC_w within the context of South African private higher education, as well as proposed two assessment tools to help assess IC_w engagement in educational contexts. It has done so through the conceptual frameworks of the Capabilities Approach (CA) and Legitimation Code Theory (LCT), and utilised existing theories of cognition and emotional intelligence. From the discussion and findings of the study, I propose the following recommendations:

1. Conduct research with the IC_w PRT

While the concept of IC_w has been enriched through this study, this is only the infant stage of its conceptual life. Running a pilot study utilising the PRT would be the starting point for developing IC_w further. The PRT is designed for long term research into understanding how educators engage with IC_w functionings in their pedagogical practices. The LCT framework allows for the identification of patterns that illustrate behaviour, provided there is enough data to find the patterns. From the identification of patterns of engagement with IC_w, problem areas can be identified and strengthened, and codes of IC_w engaging pedagogical practice can be established.

This requires a longer term, broad-based research across a greater sample size of South African PHEIs using the PRT. This would require the backing and support of academic institutions and/or the South African Department of Higher Education as the undertaking would have larger scale, scope, financial and time requirements.

2. Implementation of the IC_wSS within PHEIs

As an avenue of operationalising CA in education, as well as introducing educators to the concept of IC_w, the IC_wSS is an easy-to-use tool that can be implemented in PHEIs almost immediately. As a screening tool, it requires a brief introduction and induction on its use and can then be utilised by educators and institutions in various ways. As stated previously, educators can use this a reflexive analysis to help shift their educational practices towards more IC_w positive (IC_w+ or IC_w++) approaches. Institutions can use it to screen curriculum documents, lesson plans, or even educator pedagogical performance during quality management procedures. With the appropriate instructional session, students can even use the IC_wSS to screen their classroom, learning, or group behaviour to help guide their own development of IC_w.

While the benefits to implementing the IC_wSS into education is primarily for that of the user, by introducing educators to the concept of IC_w, it can also help facilitate discussion on ways to further develop IC_w as a concept. Moreover, it can also help CA become a more prominent philosophy within the educational sector. By having educators discuss and debate the positives and negative of IC_w, it also brings into focus the goals and philosophies of CA within an educational context.

3. Developing a more complete and accurate assessment tool with data from research

As discussed in chapter 5 and previously in this chapter, the study started out with grand intentions of being able to develop a complete assessment tool that would be able to measure IC_w levels not only in education, but in individuals as well. Through the process of the research, it became clear that at this stage of the concept's development, this initial thought was naïve at best, impossible at worst. This study has offered two pathways to establishing and developing IC_w within educational discourse and practice, and the recommendation is to utilise those two pathways to help generate data. The real proof of the concept of IC_w will only truly be established once there has been substantial data collection from the two tools. Once there is sufficient data, the possibility of developing a stronger, more accurate set of IC assessments becomes greater, which in turn will help refine the concept.

4. Develop scaled conceptualisations of IC_w in other levels or sectors of education: Public Higher education institutions, Primary and Secondary schooling.

The process of developing IC_w began with an academic extrapolation of the basic definition of IC provided by Stephenson (2012). This study argued that IC_w had three aspects to it, namely, a cognitive aspect, an emotional aspect, and a personal/professional traits aspect. The review of literature provided us with guidance and structure for the cognitive and emotional components, but it was the research that provided guidance on the personal/professional traits. The personal/professional traits aspect was the aspect that cemented the context of the conceptualisation of IC_w in that the research was conducted in PHEIs in Gauteng, South Africa. So, while the current conceptualisation based on PHEI perspectives of what is valued within the working world, this study has provided the pathway for the investigation of IC_w within different contexts. Using the Exploratory mixed-method methodology provided by Creswell & Clark (2011), similar studies to this can be developed and implemented throughout other sectors or levels of South African education. Public universities which have more focus on academia and learning than perhaps preparing for a profession may offer a different set of competencies valuations. Primary and secondary schooling may offer a very different set of competencies that are focused on preparation for the next step in the educational journey. My recommendation is that regardless of the variation of the exact competencies, developing IC_w within individuals through IC++ educational practices can play a significant role in developing higher quality graduates at all levels of schooling.

5. More operationalisation of CA within South African education.

One of the benefits from conducting this research was my introduction to CA. From an initial analysis CA appeared to be a philosophy of governance that looked to be idealistic and refreshing but lacked applicability. Through this research I have grown to appreciate the value that a philosophy like CA can add to the substantive understanding and development of education. If education is truly a way to uplift communities out of poverty and provide them with the intellectual tools to improve their quality of life and add value to society, then providing them with the right tools is of vital importance. This study argued that currently our education system in South Africa prioritizes the development of dependent capability, which allows for students to pass exams and move through the educational system, but falls short on substantive, quality learning practices that develop strong, highly capable graduates able to tackle all the world throughs at them. CA as a philosophy has a lot to offer education in South Africa where unemployment rates are high

and poverty levels struggle to improve. In this type of society, being able to make the most of the limited resources you have in order to achieve and experience your valued functionings is of utmost importance.

Thus, one of the recommendations of this study is to continue to, and increase the amount of, research within a CA framework, especially within the context of education. This can be done through the development of CA promoting assessments, CA promoting curricula, implementation of IC++ practices, and many other means.

6.5 Reflections on the study

I have been fortunate enough to have spent the better part of the last decade furthering my education through honours, masters and now through this doctoral candidacy. My studies have been part-time alongside my full-time career in education. When I started my honours, I was an educator in a secondary school and taught boys and girls between the ages of 13 and 19. During my master's qualification I then moved into higher education – specifically a PHEI – where I work to this day. Due to the part-time nature, this study has taken roughly four years to complete, and through these four years, I have grown significantly in my understandings of education, in my confidence as an educator, and, perhaps most importantly, in my humility as a lifelong learner. This section provides me an opportunity to share some of my insights into the research process, the change in my perspectives along the way, and my personal connection to the study and its findings.

At the beginning of this process, I was very unsure of taking on a PhD candidacy. At the end of my Masters in Education I had worked full-time and studied part-time for four straight years, and saw the task of challenging a research study as an Everest I was not prepared for. Fortunately, through some sage-like advice from my supervisor, and the support of my family and work, I took the rest of the year off from studying and then applied the following year. At the time I was exceedingly concerned that this was a bridge too far and I would not be able to add some contribution to educational discourse in the country, and while the credibility of this study is yet to be verified through the PhD marking system, I now feel very differently.

6.5.1 Ontological progression

Through the process of conducting this research, Stephenson's (2012) concept of IC has become a very real concept for me. It has become a concept that helps vocalize and verbalize many of my innate feelings about education that I previously struggled to describe. From my experience and educational qualifications, I am a strong supporter of Vygotsky's (1978) constructivist perspective of learning. Learning is a process of engagement with more and more complex concepts that expand your perspectives, and then generating meaning of those concepts by cementing them into your pre-established knowledge base. In many ways, this gave me confidence in the educational system of the country as, through my personal experience, lessons within the institutions I worked with provided those more complex concepts and through a good scaffolding process, concepts were engaged with and students learned.

The problem for me came in whereby seemingly smart students who had moderate to good results academically struggled when entering higher education. I experienced this predominantly when I started lecturing at tertiary level. Applications essays and results, even interviews, seemed to indicate preparedness for higher education, but the vast majority proved otherwise. It was not only in the first six months or a year, even third year students seemed to struggle with dealing with anything that wasn't working from a textbook or resource. It was clear to me, not only through my experiences, but through South African educational statistics, educational articles, my own lessons through my studies, and discussions with colleagues, that years of providing complex concepts for learners to engage with had resulted in learners developing efficient behaviours that got them to through school.

Education had missed something. Instead of constructing new knowledge through scaffolded engagement with scientific concepts, and then integrating it into their thoughts, behaviours and reasoning, students had constructed the best, most comfortable way of getting through school. This was not about learning to grow and improve but learning to pass and avoid negative consequences. Constructivism was not sufficient enough a philosophy to enable real, successful education in practical reality.

As Semper & Blasco (2018, p. 482) discuss about the hidden curriculum of higher education that

"Researchers have long documented that 'schools teach more than they claim to.'"

The concept of the hidden curriculum is really focused on the transfer of social values and behaviours of educator on their students. There has been wide ranging research on what those behaviours and values may be, but one that I see and experience in my educational career is the focus on passing tests and assignments. This focus at secondary school then sets up and/or accentuates the articulation gaps with tertiary/higher education that have been discussed in this study. This pattern of behaviour then moves with the students when they enter the working world and then struggle acclimatising to the unfamiliar environment and facing unfamiliar problems with what they perceive to be very little support.

When I first read the distinction between independent and dependent capability given by Stephenson (2012), even though it was a broad, generalised conceptualisation, it immediately resonated with my personal experience with education. Since then, this study has looked to deepen the concept of IC with specific focus on the students ability to perform in the labour market, and provide some concrete aspects that can actually be used within the education environment. More broadly, IC could be a concept that provides direction and meaning to education that encourages real, meaningful learning within students and teachers alike, but it did not quite align with the systematic and process-based perspective of education in South Africa. IC by itself is inherently humanistic in nature – looking at the individual development of people to be able to improve the application of their education into their lives and be their definition of successful. In researching more into humanism, the Capabilities Approach (CA) started becoming prominent.

CA is a perspective of human development that prioritises the development and quality of life of individuals. The research and discussion around CA is predominantly in the social justice, social policy and governance fields, but in recent years has branched into various topics including education. It takes a substantive perspective of education whereby the individual's actual learning and implementation that learning into their lives in order to enact their valued functionings in the achievement of their capabilities, is of utmost importance. As discussed in depth in this study, this perspective aligns significantly with the concept of IC and helped frame the research into developing the IC_w into a more detailed and substantive concept.

And so, reflecting on my ontological progression throughout this study, there has been a simultaneous broadening and tightening of my own perspective. Broadening with respect to the involvement with CA and the value it can add to educational research and practice as well as society as a whole and tightening in that IC_w has become a focal point for educational improvement. As discussed in Chapter 3, there have been elements of interpretivism and

positivism throughout the study, but upon reflection, I have learned that a post-positivist perspective has a lot to offer education from a humanistic standpoint. Education and learning are human processes and as a result are greatly varying and almost unique to individuals. It is only through an ontological perspective that includes both the ability to value constructed truth and statistical consensus that education can take its next evolutionary step. This is the role post-positivism can play. There is also a role for more abduction research in educational thinking. Deductive and inductive research definitely continue to provide value, but in the growing involvement of technology within education, as well a more student-centred focus means that the ability to make tentative links between observations for which there are no obvious observation (Barry & Hansen, 2008) and then act on them, are becoming increasingly valuable. The extremely fast speed of technological development and the increasing need for better, higher quality, and more accessible education requires more abductive thinking.

6.5.2 Limitations and Research Bias

As with all research there are some limitations to this study. The first and most obvious limitation is the contextualised nature of IC_w. This study argued that IC_w comprised aspects of cognition, emotion, and those personal/professional traits that were valued by employers. Theoretically, research could have been conducted to establish a global conceptualisation of IC_w, however that was both beyond the scope of the study and too far removed from the research problem that focused on the perception of poor-quality graduates in South Africa by employers. Due to these reasons, the personal/professional traits aspect was contextualised and limited to the views from 5 PHEIs from Gauteng, South Africa. This means that, while our new, developed conceptualisation of IC_w is valid, its ability to be applied in its current form in other educational environments and levels is somewhat limited.

The scale and scope of the study is also a limiting factor in that there were five participant PHEIs, nine participant representatives and 120 participant students that helped establish and evaluate the IC_w functionings. With a broader variety and larger sample size there could be added validity and credibility to the conceptualisation of IC_w.

It is also important at this stage to highlight some of the biases that may have occurred during the research.

> "*Research whether quantitative or qualitative, experimental or naturalistic, is a human activity subject to the same kinds of failings as other human activities."* (Norris, 1997, p. 173)

While bias cannot be removed entirely from research due to the above statement from Norris, through the open discussion, identification and self-critique, the impact of such bias can be reduced. In terms of the discussing the specific biases that may have occurred within the study, I will refer to the types of research bias provided by Smith and Noble (2014) in order to guide my reflection.

The first is design bias, which looks at the design of the study, its methodology and its applicability to the aims of the study. The Exploratory mixed-method design provided by Creswell and Clark (2011) was used for this study. The key aspect to this methodology is that it is best used when there is no or little prior data or pre-established concept. This was very much the case when looking to develop the concept of IC_w and so I would argue the best methodology was utilised.

Selection bias relates to the process of recruiting participants and study inclusion criteria. There is definitely some bias in this as the sample was taken from the location of the researcher and was dictated by the ability to travel to the institutions. The inclusion criteria were limited to private institutions as there are more options at profession-specific qualifications within those institutions, but these were limited to the institutions that allowed the researcher access. Finding institutions willing to participate was problematic and took longer than expected, and so the selection bias could very much exist based on relationships I could cultivate to allow access. It is also important to note that the researcher was employed at one of participant PHEIs, and one of the participating participants was a family relation, and so the researcher had a pre-established relationship with some of the participants.

Data collection bias and analysis bias focus on how the individual and personal beliefs of the researcher affect the validity of the information gathered. The researcher is currently employed at a PHEI and has worked at that level of education for about 5 years and thus has some bias towards his choice of careers and the institution at which he works. As a person who was raised in Johannesburg, Gauteng, there are obvious societal and cultural biases at play, however, as stated in chapter 3, there were steps taken to ensure that such biases did not impact, or at least had minimal impact, on the gathering and interpreting of the research data.

6.5.3 Personal realisations, the research process and the way forward

As stated previously, prior to the start of the study, I had been studying part-time for four years. This was all done at the same institution which has really been a major benefit. Due to my time at the institution, I have been able to cultivate relationships with a variety of experienced and highly qualified education specialists that have helped me throughout the various programmes. This was one of the reasons that encouraged me to take on the PhD qualification and thus have achieved and feel the growth that has happened these past four years.

The research process began with discussions with my supervisor about what I wanted to contribute to education. This question has always been in the back of my mind for a while, but when asked it directly, I did not have an answer. Through research and discussion with my supervisor, I discovered the concept of IC and thought that this could be a real contribution to academic research into poor education in the country. I have worked with my supervisor before during my masters and have a very good working relationship. This was instrumental to my progress through the study as she helped provide some structure to which I could start building my concept. The proposal was the first major hurdle, and while the presentation was nerve racking and problematic due to my continued mispronouncing of the name of Martha Nussbaum, I managed to get approved and more guidance from the adjudicators.

This was just one of the humbling experiences that I feel has really kept me focussed during the research process. Another was at a meeting with my supervisor where she stated that at some stage through this process, I would have to become the expert and teach and guide her with regards to my concept. At first this scared me to death as the more I have researched and written in this study, the more I have realised how little I know. It has taken a long period of growth and research to gain the confidence to discuss IC_w with real understanding and knowledge.

One such period of insight came during the interviews. While every effort was taken to be objective in the research process, there was one incidence which required an increased level of effort to avoid personal bias from potentially skewing the gathered data. It happened during one of the interviews where one of the participants had a very cynical perspective of the particular institute, but the words used very much expanded and generalised into including all PHEIs. For the participant, PHEIs are primarily a business and so will always prioritise money over education, and thus do not really care about the education of its students. As I work for a PHEI, and enjoy working there, this was a very problematic perspective to listen to, and it took a lot of control and

discipline to stick to the questions provided in the questionnaire. I had to remind myself that in order to truly develop and understand a concept, opinions, insight and knowledge needed to come from all perspectives to truly add to its credibility. It was a valuable lesson that I was reminded of during the audio transcriptions, as just listening to the participant again made the transcription a lot harder and a lot longer than it needed to be.

There were other frustrations that occurred during the research process. The first was the lack of access to PHEIs to ask for their participation in the study. I found it very challenging to firstly find the right decision maker who could grant me access, or secondly to get positive responses from them. One of the key values of higher education institutions should be the development of new knowledge and insight that can offer improvements within the education field, but what I experienced was more akin to cynicism and caution over sharing information. This perspective was not experienced in all PHEIs, but definitely the majority, which is very much a limiting factor when it comes to developing consensus on information. Perhaps, as private business, there is an increased value on intellectual property and a keenness to maintain a competitive edge against competition, and while there is nothing intrinsically wrong with this, it was very much a limiting factor in the PHEI research.

A real development moment worth discussing here was my introduction to LCT as a way of assessing behaviour and actions within education. Originally, when thinking about what IC_w was or could be, my thinking of assessment was very standard and basic. I would essentially have to construct a barrage of questions, activities or trials for an individual to take and then score them appropriately. As I continued with the research, it became more and more obvious that an assessment tool like that is extremely complex and supported by years of research and findings – which IC_w does not have. Thus, developing an assessment tool that measured IC_w directly became a real challenge for me. My supervisor, in her wisdom, pointed me in the direction of LCT and the work of Karl Maton. This was a watershed moment for me in my thinking of IC_w and how it could be measured and integrated into the educational world. It was an essential moment of learning and as a result I have taken a keen interest in LCT and its potential to work with IC_w in the future.

A final realisation to discuss here is my affinity to the CA philosophy. As discussed previously, IC_w has become a way of describing some of my innate feeling about education that I struggled to verbalise before. Upon engaging with CA, I had a similar feeling. While the limitations of CA have been thoroughly discussed, the strengths it has for education far outweigh the weaknesses. If we

are to move away from a process driven, systematic perspective of education which values pass rates and promotions, towards a more substantive view of education, CA is the gatekeeper.

In my opinion, CA needs to become a greater influencer on educational policies, as it is only through the enabling of graduates to fulfil their capabilities that South African students are going to be able to face the challenges of high unemployment, poverty, and a weak economy. In order for that to happen faster and more effectively, discussing and implementing IC_w centred activities in education needs to be a priority. IC_w is just beginning to demonstrate some potential, and as part of a CA based perspective of education, it has the potential to contribute greatly to the development of highly capable South African graduates, ready to take on the unfamiliar challenges in an unfamiliar and constantly changing work environment of the global community.

6.6 Final Conclusion

This research study has highlighted some of the problems regarding the quality and capability of graduates in South Africa. It has proposed that a possible reason for this is the lack of IC in graduates, and through the lens of CA, proposed that Independent Capability for Work is a critical functioning for achievement in the capability of work. This study has explained how similarly intangible concepts, such as emotional intelligence, have been assessed in previous studies; specifically through the measure and interaction between key competencies or concepts that are more amenable to assessment (Boyatzis et al., 2002). This was used as the premise of exploring the work-based functionings that constitute IC_w.

It is the belief of this study that the development of IC_w engaging educational practices will improve the quality of graduate in South African education and help address the increasingly negative perception of South African graduates by the labour sector (ManpowerGroup, 2015; *Mission Talent Mass Uniqueness: A Global Challenge for One Billion Workers*, 2019) as outlined in Chapter 1. Graduates who are better able to enact the 9 core functionings of IC_w are better equipped to succeed in the unfamiliar world of work. Moreover, IC_w can also help in the improvement of higher education students to complete their qualifications to a higher standard and quicker time, positively impacting the qualification completion statistics of the country (Amnesty International, 2020; Department of Higher Education and Training, 2018; The Department of Higher Education and Training, 2019; Wilson-Strydom, 2011)

Through the assessment of educational practices, patterns of IC_w engagement can be developed to help guide and improve the development of IC_w within students. The development of IC_w as a concept also offers a strong pathway to operationalize CA within education. CA has already contributed to education and it is the proposal of this study that IC_w can add to the movement through evolving pedagogical practices.

At its core, this study is merely the first step in establishing the concept of IC_w and its assessment in education. With further research, through the use of the IC_w SS, PRT and other as-yet-to-be-designed tools, I propose that IC_w can offer some real, implementable solutions to improving the quality of graduate in South Africa.

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Appendix

1. Semi-structured Interview Schedule Exemplar
2. An example transcript on 1 PHEI representative participant – Participant 7
3. Questionnaire schedule – printed version and online example
4. Ethics clearance certificate
5. Information sheets to institutions and participants and email to students
6. Semi-structured Interview Competency Table

Appendix 1: Semi-structured Interview Schedule Exemplar

The interview schedule is broken into 3 parts:

Part 1: Professional details of interviewee

Part 2: Educational perspectives of Interviewee and the institution (*will change slightly for each institution*)

Part 3: Valuations of competencies

Part 1: Professional details of interviewee

	Question	Response
1	What is your position in the institution?	
2	What are your qualifications?	
3	Do you have any specifically education-based qualifications?	
4	How many years have you been in this particular PHEI?	
5	How many years have you worked in tertiary education?	
6	Have you worked or are currently working with / for any other higher education institution? If yes, could you please elaborate?	
7	Was your professional goal always to be in higher education?	

Part 2: Educational perspectives of Interviewee and the institution (*will change slightly for each institution*)

	Question	Response
8	In your experience, do you feel that the students you take into the institution every year are suitably equipped and prepared for tertiary education? Please explain your answer.	
9	In your opinion, what are some of the key competencies that are lacking from newly inducted students? Please could you elaborate?	
10	What are some of the warning signs that student display that indicate in your opinion that they are going to struggle in your institution?	
11	To your knowledge, has the institution made any or implemented any strategies to address the suggested lacking competencies? If so could you explain some of them or give an example?	
12	Are you aware of the institution's teaching and learning strategies and missions according to its policies and other documentations?	
13	To your knowledge, is the development of any of the competencies you have mentioned promoted or documented in the institution's educational policy or mission?	
14	In your opinion, is the development of any of the competencies you have mentioned	

	promoted in the general ethos of the institution?	

Part 3: Competencies: aspects of a student that are desired or required to develop during their time with the institution.

Categorized into 4 types: *(will be explained to the participants)*

- **Personal – competencies regarding the development of personality and character**
- **Professional – competencies regarding their ability to succeed in their desired professional career or industry**
- **Cognitive – competencies regarding the intellectual capacity and ability of the student to utilise knowledge**
- **Emotional – competencies regarding the emotional development and emotional management of the student.**

	Question	Response
15	Give 3 ***personal competencies*** that you believe students should develop during their time with the institution.	
16	Please explain why you place such high value on these competencies.	
17	In your opinion, how would an institution develop these competencies within students?	
18	Give 3 ***professional competencies*** that you believe students should develop during their time with the institution.	
19	Please explain why you place such high value on these competencies.	
20	In your opinion how would an institution develop these competencies within students?	

21	Give 3 ***cognitive competencies*** that you believe students should develop during their time with the institution.	
22	Please explain why you place such high value on these competencies.	
23	In your opinion how would an institution develop these competencies within students?	
24	Give 3 ***emotional competencies*** that you believe students should develop during their time with the institution.	
25	Please explain why you place such high value on these competencies.	
26	In your opinion how would an institution develop these competencies within students?	

Thank you for your time and efforts.

Appendix 2: Interview Transcription – Interview 7

ITN = Interview Transcript Number

The interview schedule is broken into 3 parts:

Part 1: Professional details of interviewee

ITN	Interviewer	Participant
1.	Right XXXX, so thank you so much for allowing me to interview you. I'm going to be interviewing you in 3 parts. There are 3 parts to this. The first part is to get a bit of background about you, and the second part is a little bit about your educational perspectives and experiences and the third part I am going to be asking you about competencies that you think tertiary level students are missing or that you'd want to see in them or that you are seeing in them. Alright but I will explain each part as it comes. So just to start, **what is your position here at the institution?**	So I am the Academic Co-Navigator and for people who are not involved in our institution I basically look after teaching and learning for the campus, making sure we comply with competencies and policies and that all the people that lecture here know what the expectations are in the classroom.
2.	Alright. Fantastic. So do you also, when new teachers come in you guide them in the admin and how things work?	Yes. So I do 2 different types of training initially. So the first training is for what I call Newbies. First time lecturers at our institution or first time ever and then we go through policies. All the academic policies. We do literacy training for our different platforms that we use which is Blackboard, our library is also online, staff portal and all those kinds of things. And then the second session is for returning lecturers and for them it would

		be a case of looking at policy updates if there are any updates, or if there is something specific that we are focusing on, for example this year we are focusing on constructive feedback, how do we give constructive feedback, and then different teaching methodologies in the classroom that they can employ.
3.	Alright. Perfect. That is quite a broad set of things. Alright, so **what are your qualifications?**	Do you want all of them? I have got a national Diploma in Photography. A Btech in Photography. A Mtech in Photography. I have a PGDip in Tertiary Education and I am currently busy with a PHD in education.
4.	A PhD? Through which institution may I ask?	UJ
5.	UJ. OK. And how far are you along?	In terms of my PHD? OK so, 1 and a half years. My proposal, I have been doing part time, so I had a year for my proposal. The proposal went through in January and now I am busy with the literature review and the research methodology chapters.
6.	Alright perfect. Well good luck.	Thank you.
7.	So you do in fact have specific, education-based qualifications, as you said, the Post Graduate Diploma in Education and now you are doing a PHD.	Correct.
8.	**And so how many years have you been at this particular institution?**	7 years.
9.	7 years. **And have you worked in tertiary education before?**	7 years at the previous place as well.
10.	In the same field?	No, So the first 7 years with the previous institution was purely lecturing, so I did

		curriculum development. SO obviously the structures are different from private to public. So in public you were responsible for your own curriculum development, your own setting of assessments, that kind of stuff so I did all of that, and then obviously the lecturing, and then for the first 2 and a half years at the current institution I also lectured and then moved into programme management, where I oversaw content development, content delivery in terms of lecturers not to students, and obviously, eventually to students as well. And then 3 years in the current position. 3 and a half.
11.	So very experienced. SO you have worked with an institution before, for 7 years. **Do you do anything part time or on the side, in your own space? Side gig?**	OK. So yes I do. I am a practicing photographer still, so I do wedding photography. I do portraiture, family portraiture and I also do animal portraiture.
12.	Wow. So you have actually managed to find a career where you are teaching something you love, while maintaining doing the thing you love?	Yes.
13.	Well done. So that leads me to my next question. **So was, when you were studying your Diploma in photography, etc. did you see yourself going into education at some stage? Or was it something that popped up? How did that come about?**	OK. Well, if you had told me while I was still studying that I would be in education as a career, I would still be on the floor laughing. So, when I,… I went straight for my Btech into my Mtech and I was 22 and so they said to me, while you are busy with your Mtech, why don't you come and lecture for us? We need someone to lecture photography to the graphic design students as well as the Public Relation students. And I said Well, why not? And

		then fell in love with education completely, totally, utterly and so education has been my focus pretty much from that day.
14.	So it started out that you were going to be a photographer in whichever shape that took and through an opportunity you took up it then came into it?	Correct.
15.	OK. That's a good story. Perfect that's all I need for that section,	

Part 2: Educational perspectives of Interviewee and the institution (*will change slightly for each institution*)

	Interviewer	**Participant**
16.	Now the next section, as I said,… I am basically going to ask about purely from your perspective, you are not necessarily, you don't have to speak for anyone other than yourself. Alright. So the first question: **In your experience, do you feel that the students you take into the institution every year are suitably equipped and prepared for tertiary education?** **Could you explain a bit please.**	No. Not all of them. Ok. So, if you look at the South African educational system, when you look at schooling, the way you sort of equip students at school, and the way which you expect them to become independent, off the bat when they walk into their first lesson does not compute. So students are not equipped for tertiary education in terms of being self-sustaining, self-sufficient, self-motivating and all of those kinds of things. So it really takes a lot of orientation with them, maybe even a little bit of hand holding for the first 6 months or so to

		make sure they know how to set their own pace. They are responsible for their own learning. All of that kind of stuff, so that's from a sort of pure learning point of view. But also, many of our students are afraid of technology, so going from having everything given to you, to having to access everything for yourself, and making sure that you are up to date on your content and information and you've done the required training… I find that there is a gap there. Students don't necessarily engage to the level they should. So ja. So you've got the NQF levels in terms of you know when you walk into university you start off either in NQF level 5, depending where you are, but there are certain requirements of you at that level, and students don't understand when they walk into that specific NQF level whether its 1st, 2nd or 3rd, 5, 6 or whatever, they don't have a skill set yet to cope with that NQF level. They will only have that at the end of the NQF level once they have mastered everything. And I find that causes frustration and I suspect, I think, speculation here, that that could cause a lot of drop outs. Students need to understand about education.
17.	That it is a commitment. It is over a period of time. You don't get instant rewards. You have to see things through towards.. .	Correct. And then one more observation that I've seen is that because we are moving towards having content online available only, we don't provide material, printed material anymore, many students don't have access

		to either smart devices or data. You know, so especially when they need to come home and access something from home, and they don't have access to data, they cant access the required readings and things like that which means they have to be on campus to work. So if theres no space for them to work on campus or if it's a transport concern, if they actually don't have transport to come here at specific times or be here for the whole day, it does cause a little bit of a problem if they don't have that access.
18.	So its not just, in terms of preparation, its not just mental aspect, or the learning aspect, but there are all the practical elements as well? The logistical elements of actually being prepared? That's a really good point.	Correct. Well if you look at the statistics, 40% of the South African population still don't have access to the internet. Never mind smart devices, that's just internet.
19.	Really?	Although I have to be honest, I think those are 2017 stats.
20.	OK. Well that's a good stat. Ok. Wow. I didn't realize that. Well that's definitely not just from the mental side but from the practical side as well.	I can tell you which areas are the biggest problem? So if you want to start looking at specific problem areas start with Limpopo.
21.	Limpopo? OK. I will make a little note here. So, **in your opinion what are some of the key competencies that the students are lacking?** So you have mentioned that there are… you've mentioned independence. **What are some of the competencies that you think they lack in the beginning?**	OK. Very definitely computer literacy. Very definitely Academic Literacy. With academic literacy specifically what are academic sources. I find in the digital era, students don't understand what is an academic source so they tend to use websites, blogs, that kind of information to write their essays, so they really struggle to understand why its important to have academic, sound sources

		and then of course the referencing element. They do struggle with that.
22.	So computer literacy, academic literacy, sources and referencing understanding. OK. So what would you say…. So… now we are switching it up a little bit here. When you are lecturing or running a course or a module, **What are some of the warning signs that students display to you that indicate, in your opinion, that they are going to struggle at your course, at the institution, and tertiary education? What are some of those key things that you have experienced or picked up that students display that give you big, ok I need to give you attention.**	Warning lights? Ya. That's a good question. That's an excellent question. I would say lack of engagement. If you see a student is not reading information, because we do practice flipped classroom quite a lot, which means if the student doesn't read before the time they can't participate in your activities when they come into the classroom so very definitely lack of engagement. I find that relationships also help with that, in that a lot of students will come to you and say that look I haven't been able to access this, that, or the next thing. So that obviously as well. And then I use an online tool called Kahoot which gives you instant feedback so its completely anonymous and the students can give you… you can ask them questions on their phone and it gives you stats right after. And so if you use that either for teaching methodology feedback or for content feedback that helps seeing where they are at.
23.	So immediately, at the end of a class, just go on to this thing and tell me what you thought of this lesson, or the content of today's lesson, or what your thoughts are, where we	Correct.

	should go from here, and they do that immediately.	And then we also have activities that we do in class. So based on the activities you can see if a student hasn't engaged with the content. If they are not able to complete the activity, then you can see this is going to be a problem. Or if you go into a digital lab with them and they don't know how to log into a computer. You know, the kind of questions the students ask you, for me is the biggest indicator if they are going to struggle or not. And then, ok, this may be a little bit of a weird one but I often find students hang back to ask some questions, the students that never hang back, that never ask you any questions, those are the students that I normally have a concern about.
24.	So, **to your knowledge has the (and you are the exact person to ask this) has the institution made any strategies or implemented any strategies to try to deal with these problems that you have mentioned?**	Yes. Very definitely. Do you want to know what the strategies are?
25.	Yes please.	OK. So what we have done for our first year students is we have implemented what we call a "Empower Hour." Ok so in the Empower Hour we go through various aspects of their learning. Simple things like how to use your manual guide. So the manual guides are set up to say: these are your assessments. This is the content and what you need to learn for these assessments and this is how you

		should answer this assessment, this is what you can expect from this assessment. It is very interesting to me. Students will read through the guide but they don't understand how to use it. If that makes any sense whatsoever. I think it's a case of you can't see the forest for the trees kind of thing? So from our perspective, from the person who sets it up's perspective you've got the context in your head and you know exactly what you want from the student. But when the student reads it they don't have the same context so those are the things we do in the power sessions.
26.	Ok. So providing that extra context for the manuals.	How to use the manuals.
27.	And is that for everybody or this like an invite kind of thing? Is it an open invite…?	We schedule it on the timetables.
28.	It is scheduled?	It is scheduled. Correct. We also use those empower sessions for the different digital platforms and training. We do an orientation session obviously at the beginning of the year, but over the years we've found that it is too much information too quickly. Which brought about the empower sessions. So the empower sessions would again take them through the online platforms, student portal, student hub, you know blackboard, all that kind of stuff and how to use that. Then we also have people who sort of work with…. Um… wellness kind of space. So they

		would come in a do sessions on Time Management, or sessions on learning strategies.
29.	So these Empower Hours happen once a month?	Weekly.
30.	Every week.	Weekly for the first 6 months and then second semester we have a look at where it is still necessary. For our higher certificate students it happens throughout the whole year, but for our degree students we would then look at doing it bi-weekly. Or something like that. So that's the one element.
31.	Its not assigned any credits or anything like that? It is purely a supportive mechanism.	No no. Yes. It is purely supportive. OK. Then we also have what we call "Just in Time" sessions for our students.
32.	Just in time sessions?	Just in Time sessions. Those are for all our students, Higher Certificate through to Honours – the masters students are distance so not for them. The Just in Time are done by our librarians and that's for your academic literacy your referencing, that kind of work. And the reason we call them just in time session, is because they are usually much better attended before assessments are due.
33.	Absolutely. Certainly there is a spike.	Correct. If a student does show signs of struggling with referencing or with plagiarism or that kind of stuff then we set up a meeting with them and the librarian and they go through specific areas that the student is having problems with. So we do also have that.

34.	So that's more of a reactive thing? So once a lecturer has picked up that this person is dicing plagiarism or is fully plagiarism then you have that support mechanism to say: Right. One on one lets make sure it doesn't happen again? OK	Sure. Correct. The other thing we do is we have what we call At Risk Modules. And so we identify at risk modules based on results from the previous year. And then what we do with the At Risk Modules is we notify the person lecturing that module this year if its not the same person. We also have module discipline leaders which then work with the lecturer in that space. And we try and identify what the concerns could have been from the previous year and we address them in how we deliver content and activities. For example if we find there are specific fields… lets say there is a shared module. OK. And a specific field of students in that group is not their core module so they are not paying that much attention to it, then we try and bring in examples that speak to that core, so they can…
35.	Make it more relatable?	Make it more relatable. So those are the kind of things we do. It depends on what it is. What the module is. What the concern is and what we identify. But we do have the At Risk Modules.
36.	So an At Risk Module would be that a number of students… or the marks were particularly low, or there could have been behavioural, or particularly bad feedback sessions, low attendance?	Low attendance is a major problem. Especially if your policy is not that attendance isn't compulsory. So yes. We do look at those kinds of things but how we identify them is through the pass rate. If the pass rate is lower than… we set ourselves targets each year. If they didn't reach that target then it obviously

		becomes an At Risk module. Or if its exceptionally low then definitely, but ya, I would say attendance is a major problem.
37.	Just as a general point.	Just as a general point ya.
38.	Do you…. How do you control that? Or… I mean… Its really difficult to control but, like, do you take attendance every day, every lesson?	We take attendance for every module, so not per hour but every module and if a student isn't doing well, we pick up – again its reactive not proactive – if we pick up that a student is not doing well we obviously look at the attendance, and then we have a conversation with the student saying: Listen, this is what we have seen. We do think it is related to your attendance. But even before that, you know, you are working with adults, people that should take responsibility, so we always try, as I mentioned earlier as well, we are always trying to drive home to the students that it is their responsibility to study, to engage, to participate. And if they don't come to class they miss out on all of that. And yes they can read through the content themselves but they are missing out on the context. They are missing out on an expert point of view in terms of how the content fits into the world of work. So we try and drive home with them the importance of attendance. But especially when assignments are due the attendance drops way down because the students then skip classes because they are focusing on

		getting their assignments in and ya so, if you come up with the golden sort of process for us on how to solve attendance…
39.	That's a PHD all on its own. No, obviously its an issue, but it must be so difficult, because you cant control everyone and unless you provide the transport at huge infrastructure costs, like pick up and all that sort of stuff it becomes… Even then I don't think you could sort it out. Anyway, something to think about. So my next question is pretty straight forward but I have to ask it: **Are you aware of the teaching and learning strategies of the institution and its ambitions according to its policies?**	Yes. Because I have to teach other people.
40.	Yep. OK. Thank you. Because not everyone I interview will be bang on the money of what I am looking for. OK **To your knowledge, is the development of any of the competencies that you have mentioned promoted or documented in the institution's educational policies?**	Yes. To death.
41.	To death?	To the point where I hate admin.
42.	Alright is it… actually let me ask that. So you recognise the problems and the lack of competencies in feedback and that sort of stuff. Your institution puts the policies together to try and do that. **Is that almost detrimental to the process? Because when you are trying to address these problems specifically at a larger**	Ok. So. Look it is a difficult space. So because of the way we are structured I have managed to keep that away from my lecturers. Ok/ It all sits with me. In terms of the documenting and providing evidence. So we have to be able to… We get audited every year whether its internal or external, so I have to… and every year they choose a different

	institution, there's all the documentations, all the paperwork, there's all the things that have got to be done to make it seem like they are doing something. Is there a tension there somewhere?	one which we focus on, and as I mentioned this year, I chose it, this year its constructive feedback. So I would say to my team right, this is the information I will need from you. When I bring a new person on board I say to them: look, these are the things. Yes you've got the lecturing, and I mean I've got 70 odd lecturers and only 11 of them are full time. So I have to make clear to somebody who is only here as an independent contractor what the expectations will be. I have to say to them: This is our policy. This is what I need to report back on. These are the kind of adminy stuff that I am going to be needing from you. Whether it's a marking rubric. Whether it's a reflective feedback form, whatever it might be. And then they would feed that into either my module discipline leader team, which feeds it into me, or it could come directly to me. Ok so I do all the capturing, what have you. Because I don't lecture anymore It gives me all the time to deal with the adminy stuff. And it allows me to support my team in a manner that hopefully it doesn't make it so admin intensive for them. But what I always talk about with my is that I will say: These are my bare minimum expectations. So I draw an iceberg for them. And I will say these are my bare minimum expectations, and then

		populate the bottom of the iceberg with what the extra add-ons are. So the bare minimum is what we have to do to comply with policy. But yes. If you are not careful in how you manage it, it can distract from what you are actually trying to achieve. But that for me is what the lecturers deliver. That's what they need to achieve. SO by keeping the admin on my side and make it as little as possible from them, then it shouldn't infringe upon them, but it probably does happen.
43.	I completely understand.	Did I answer your question?
44.	Very much so. Yes. Thank you. SO the last question in this section is again, you opinion: **Is the development of these kind of competencies within the students, are they kind of part of the general ethos within the staff?** Is it like you said, you have 70 different lecturers, only 11 of whom are full time, who, for the sake of argument would sort of buy into the institutions policies. Having a large portion of part timers might prove difficult. **Do you fell there is a general ethos about that, or is it something you kind of battle with?**	We don't battle with it. We have a joke that once you start lecturing here you have drunk the cool aid. You have joined the cult. We are very fortunate that the kind of person we attract is automatically who we are as a brand. And it fits in with our ethos. So I find that if I don't follow up, and make sure my team are doing what they should be doing, I get: Listen XXXX. You haven't looked at this in a while, will you please look at how we can get everybody on board. So that is a nice thing that we have going, and it becomes a sort of like family. And it is actually quite heartbreaking when somebody leaves because its like losing a family member, but also to support that I do have orientation session as I mentioned at the

		beginning of each semester. And we also have teaching and learning sessions on a bi-weekly basis, so people either attend face to face or we do a skype call or something like that. And then we also have the teaching and learning organisation on BlackBoard. And all the content that I deliver, everything I share, all the things that we focus on, everything goes onto that organisation and the lecturing team engage with that. So how do I make sure they engage with that with my little forms and my little checks and reflections and what-have-you, and teaching portfolios and things like that that they participate in.
45.	So you think the general ethos of the teachers are about developing the students?	Yes. Because that is what we believe in. And that is what I drive home in them as well. I mean, yes, you are probably not going to reach everybody, and theres one or two people you don't get through to that. They have kind of looked at the cool aid and considered it, but they haven't drunk it yet. But an interesting phenomenon, I don't think it happens at other institutions, is that students come and report back to me. If a student is not happy in our classroom. If lecturer A is not delivering the same as lecturer B in terms of how they deliver, a student will come to me and say, Listen, I am having a problem here please can you look into it, and I would do a peer observation and go and sit in the classroom and see where,

		from both sides, where is this coming from and how can we address this concern. SO it does allow me the opportunity to… and again it is reactive, but I do schedule peer observations with absolutely everybody in a 1 year cycle. Everybody that is on our campus will go through a review session.
46.	Alright. Perfect. Thank you. So that sums up the second part and the last part is a little bit different.	

Part 3: Competencies: aspects of a student that are desired or required to develop during their time with the institution.

Categorized into 4 types: ***(will be explained to the participants)***

- **Personal – competencies regarding the development of personality and character**
- **Professional – competencies regarding their ability to succeed in their desired professional career or industry**
- **Cognitive – competencies regarding the intellectual capacity and ability of the student to utilise knowledge**
- **Emotional – competencies regarding the emotional development and emotional management of the student.**

	Interviewer	Participant
47.	I'm going to ask you – I know some of it we have talked about already – but I'g going to ask you: **What kind of competencies you would like to see your students leave here with?** The ones that are very much ready to go out into the world and start to build their career. **What do you think the key things that you would have?**	OK. So. Responsibility.

	And just to give you a guide; all you have to do is talk and I am going to try and do my best to filter them according to 4 sides: The first one is personal characteristics. The second one will be professional. The third one is Cognitive, and the fourth one is Emotional. So you don't have to categorise them. You just talk and tell me and I will do the work there. So just some ideas. **What are some of the competencies that a student arrives here, goes through your 3 year programme and leaves, what are the key, core things that you believe you want to see in them? That should best benefit them.**	
48.	Responsibility? How so?	So they have to understand that when they go into the real world, you can't say: "oh I didn't do my job because I didn't have access or, you know, I didn't have time, or I was too tired or what-have-you. And so, they need to be responsible for themselves, in what they deliver and how they engage, for that matter, as well, because at the end of the day they have to be able to deliver. And they have to understand that that is their responsibility when they agree to take something on

		OK. Participation. In life, and the world, and work, and everything around you. Because you are not an island and you will work with other people. You have to understand that you need to give to get, does that make sense?
49.	Is that something you see particularly in the first years or is that throughout that you see these kind of things?	Throughout. If you look at industry and how industry has changed. They don't just want a photographer anymore. They want someone who can also do a bit of social media marketing as well, you know, or somebody who can…. I don't know…
50.	Tick a few boxes?	Tick a few boxes. So if you are not going to participate and interact with people around you, either in the same field as you, or in a different field is even better, you are going to work in a silo, and if you work in a silo, you are alienating yourself and you are not necessarily going to be as valuable in the industry as they want you to be.
51.	Shoo. So participation in life? You are not an island. Engagement?	Yes. Correct. Shoo. There is a lot.
52.	The more the merrier. You just go.	Lets see. We've got responsibility. Participation. Critical thinking. Critical thinking because – and especially in our country – there are so many concerns, so many social problems, and so many people really struggling out there, and there are so many things that we have to look at, that we have to make improvements on, not just for yourself but for everybody around us.

		So if you look at things. If you are able to step outside of your own experience, and critically evaluate how someone else might be going through something or seeing something. Not only will you be able to reach your, whichever population that you are speaking too in terms of professionally, but you also have a little more consideration for people who fall out of your experiences.
53.	So that kind of empathy, in fact, specifically for the industry that you are preparing students for, Its not just being human and understanding the story, it's the ability to understand the audience and what they want, and how they feel about things would directly result, or would directly impact the quality of your work, surely?	Absolutely. 100%. For sure. But we do believe that, well I believe that, there's more to that as well in the social responsibility space. You know, if you think about, and again focusing on South Africa, I know we all get so angry at taxis for example, but take a step back and consider how incredibly innovative those guys are. To have seen a gap like that first of all right, to come up with a system that is completely fully functional, ok, sometimes we all start screaming at them thinking they are dysfunctional but how many people wouldn't be able to get to work, or to school, or wherever they need to go if it wasn't for that? So a little bit of consideration and understanding how that industry works as well and what drives them. And understanding that it is not always necessarily the driver who… he drives like that for

		a reason. What is that reason? Is there something I can do about that reason? Those kinds of questions I would like to see from students.
54.	OK.	And on to that as well. If you think about our planet and the state of our planet, and where we are heading, there are future… many, many, many future generations that still need to live on this planet. So in terms of social responsibility, what little part can I do to ensure that future generations will have a planet with resources, that they are able to live in. I don't have children, but if I had children, I would want them to be able to function still and to have air and water and work and, you know, food. All these kinds of things. So very definitely social responsibility. Not just, again, living in that silo.
55.	OK	Creative solutions seekers, very definitely. And again, maybe I have drunk too much cool aid, but I do believe in that. Question everything. And so students need to question. Always need to question because it is not about reinventing the wheel, but what if there is a better wheel? What if the wheel actually does need to be reinvented? So that kind of creative solutions thinking. Not just accepting at face value of what someone is saying to you. Question it. Well What else? Shoo.
56.	Well you have already given me a whole bunch here. I mean you have talked about the cognitive side already. You have	Very definitely. So we mentioned the thing of ticking more than one box, about being diverse. Ok. But also etiquette. Work Etiquette. So your

	talked about the emotional aspect of it. Maybe just to help me, obviously you know more about the professional side. When the students leave here, and I recognise that there are some specific pathways within the broader industry, but as general things are there sort of, professional expectations or things that the industry demand of graduating students, in that specific context?	communication, email communication big one. Those kinds of things. Understanding that knowledge is not just for you to sit on. It's for you to share, you know information is to share. So definitely that. Responsibility play into that one as well. Understand that you can't be late for work you can't blame the traffic in Joburg because that's why I wasn't at work at 8 o'clock. Then competency. Very definitely. There absolutely has to be competence in whatever it is that you take on. Commitment.
57.	Commitment?	Commitment. You know, I had an interesting conversation the other day, where a student told me: "well if I don't like my job I will just resign and find something else." You know, and I'm like: "Darling it doesn't work like that."
58.	In a country with a third of the country unemployed?	Take a look at our unemployment rate and lets talk about that again. So you have to be, whatever you take on you have to be committed. Even if you don't love it, you have to find something in it that you love.

		You know whether it's the money that you get out of it, or whether its an element of whatever you do, you have to have that commitment so that you deliver your absolute best. And that you do what you need to do. You know, at the end of the day, you will also have in your workspace boxes that you need to have ticked. "Today I had to get done A, B, C. Did I get A, B, C done? So definitely commitment.
59.	OK.	Kindness. Curtness. Big one. You know. It costs you nothing to greet someone in the mornings. So, you know, you need to be able to not necessarily socialise with co-workers but you have to at least be able to co-habitate with them, so that you are able to function as a team when you are working in a team. So Team Dynamics. Very, very important. Um. Gosh. I could go on for hours on this.
60.	That's good.	Expectations. Know what you can expect and also be clear on your expectations in terms of workspace and be realistic with what you can accept and what you can't accept. For an example, a couple of years back I had a student who would have died in an office. Wouldn't be able to work in an office. SO he had to find out what it was that he could do. What he really could function. His personality just wasn't aligned to office spaces. He just couldn't do it.

		So know yourself. Know your expectations and be clear about your expectations. With that obviously be honest. If you can't use a typewriter don't say that you can use a typewriter. Oh Gosh. What else?
61.	Well look I mean that is plenty. You have given me huge things to go with here, so thank you. So without even specifying things you have actually highlighted a bunch of other stuff, so, I mean, that is absolutely plenty.	Ok. So sorry. I should have warned you before the time that I am very much a people's person. I'm about empathy, and not just focusing on yourself, but how you impact on other people.
62.	That's excellent. I mean, that's why I have all these interviews so that I can get the different scopes. I have the stalwart academic, the stalwart disciplinarian, the stalwart socialite and social side.	But I also have to say that is why I work where I work, because my views, my philosophies are aligned to the company, and what the company believes and what the company implements. SO I know what I believe in we do, because we are aligned.
63.	Its very much aligned… I think that is very powerful especially in private higher education institutions. You get a lot of power when you get people who believe in what they are doing. And I think that is one of the key distinguishing factors in the private higher education space. OK. So look the last question that I will ask is a little bit different and this is more out of my own interest, but it does have	Ok. So. A very personal point of view right? So I believe that we are all born with the same kind of clean slate. We all have the same capabilities. Its just how you apply yourself. So when I first walked in here, students of different qualifications, be it Higher Certificate, Diploma, or Degree, were seen as a different kind of student in terms of what they could achieve and what they could deliver and what they could be when they finished. I don't believe that.

	some relevancy. At this institution you do have Diploma's and you do have Degrees. IN terms of the Diploma students, and I know they go into slightly different streams of work, **Do you find that, purely in terms of readiness for the job, or for real world work or for life that first kind of step, do you think there is any difference between the Diploma and the Degree?** **Are the Degree graduates better prepared? Are they more ready? Are the Diploma students ready? Is there a difference? Is there no difference?**	I believe if you put the right kind of environment in place and you give people the right kind of tools and the right kind of motivation, incentive and belief in themselves that you can get everybody there. But it is very much about what you put in place. If you make a Higher Certificate student feel like a poor relative, they will behave like the poor relative. So yes, maybe once they have started they may need a little more support, but you'd be careful with how you word that support. So, for example, our empower sessions. Don't just roll it out for the Higher Certificate students. Roll it out for all the first year students. It means that you are not singling out any specific group. You are not pointing fingers to any specific group. So to answer your question. No. I believe they can all deliver the same once they walk out of there, provided how you treated them was the way to help them get there. So ya, that's… but that's a very personal thing.
64.	I think that's a great answer, because, I mean, I suppose that's the point. So even with the NQF level 7 tag and the NQF level 6 tag, you believe that given the right conditions, given the right courses, both students can leave perfectly capable, perfectly ready for the work environment, working at the same kind of level?	Absolutely. So a little bit of an analogy here for you, so, students walking to their first maths class and what kind of context do they walk in with? "Maths is so hard. You are going to struggle so badly." So when you walk into your first maths class you are already petrified. You are already doubting yourself, because people have told you that. So yes you are going to struggle with Maths, but hello, did you know that when you climb stairs your brain is automatically doing maths in terms of how high, how far your foot needs to go up and in

		for you to be able to climb those stairs without tripping. So in actual fact, we are already coded to be able to do maths, you just need to trust yourself and have faith in yourself that you will be able to do it. And maybe it's a little bit idealistic? It probably is but why not aim for the best and make sure that you give that, rather than say oooooh its so difficult. You are going to struggle.
65.	Well said. Well said indeed.	But as I said, sometimes I feel like I am a little bit alone on my island with that one but I do believe that.
66.	Fantastic. XXXX. Thank you so much we have come to the end. I really appreciate your time.	It is a great pleasure.

Appendix 3: Independent Capability Student Questionnaire

Please answer the following questions as honestly as possible. The aim of the survey is to understand what you as a student think is important in the development of your career. Your efforts are greatly appreciated.

1. Rate the importance you believe the given ***personal*** competency has with regard to your preparation for your professional career.

Competency	1 (Not important at all)	2	3	4	5	6	7	8	9	10 (Extremely important)
Professionalism										
Good work ethic										
Being trusted/dependable										
Responsible										
Personal communication (communicating personal thoughts and feelings with others)										
Deportment (the way a person stands and walks, particularly as an element of etiquette and behaviour)										
Independence (living/working on your own. Being self sufficient)										
Being motivated and committed										
Knowledge of yourself										
Participation in the world around you / being a participant citizen										
Honesty										
Willingness to learn										
Self Discipline										
Relating to others										

Please give any other personal competency not given already that you believe is important to the development of your career: _____

2. Rate the importance you believe the given ***professional*** competency has with regard to your preparation for your professional career.

Competency	1 (Not important at all)	2	3	4	5	6	7	8	9	10 (Extremely important)
Professional writing										
Academic literacy										
Time management										
Good understanding of business										

Presentation skills / sharing knowledge										
Managing yourself										
Computer literacy										
Flexibility in role and tasks within your job										
Technical competence in you specific area of focus										
Having clear expectations from employers and for yourself										
Listening skills										
Teamwork										
Numeracy										
Entrepreneurship										
Conflict resolution										
Selling yourself										
Professional communication (Communicating ideas, plans, decisions,etc.)										

Please give any other professional competency not given already that you believe is important to the development of your career: _____

3. Rate the importance you believe the given ***cognitive*** competency has with regard to your preparation for your professional career.

Competency	1 (Not important at all)	2	3	4	5	6	7	8	9	10 (Extremely important)
Critical thinking and evaluating										
Analytical skills										
Reasoning and logic										
Intellectual Integrity - sourcing, referencing and using information responsibly										
Problem solving / Generating solutions										
Linking different concepts together										
Good decision making										
Creative thinking										
Having industry specific knowledge										
Being able to apply knowledge into the real world										
Develop and justify opinions and ideas										

Reflexive thinking (thinking about ones own actions, behaviour and decisions)										
Having a wide variety of knowledge										
Attention to detail										
Preparation for higher levels of academia and qualifications										

Please give any other cognitive competency not given already that you believe is important to the development of your career: _____

4. Rate the importance you believe the given ***emotional*** competency has with regard to your preparation for your professional career.

Competency	1 (Not important at all)	2	3	4	5	6	7	8	9	10 (Extremely important)
Emotional Intelligence (Managing one's emotions and those of others)										
Being emotionally prepared for the working world										
Consideration for other people										
Empathy										
Kindness and Caring										
Stress Management										
Being able to separate personal and professional issues										
Dealing constructively with criticism										
Appropriate responses to various situations										
Emotional stability										
Emotional Maturity										
Developing a "tough skin"										

Please give any other emotional competency not given already that you believe is important to the development of your career: _____

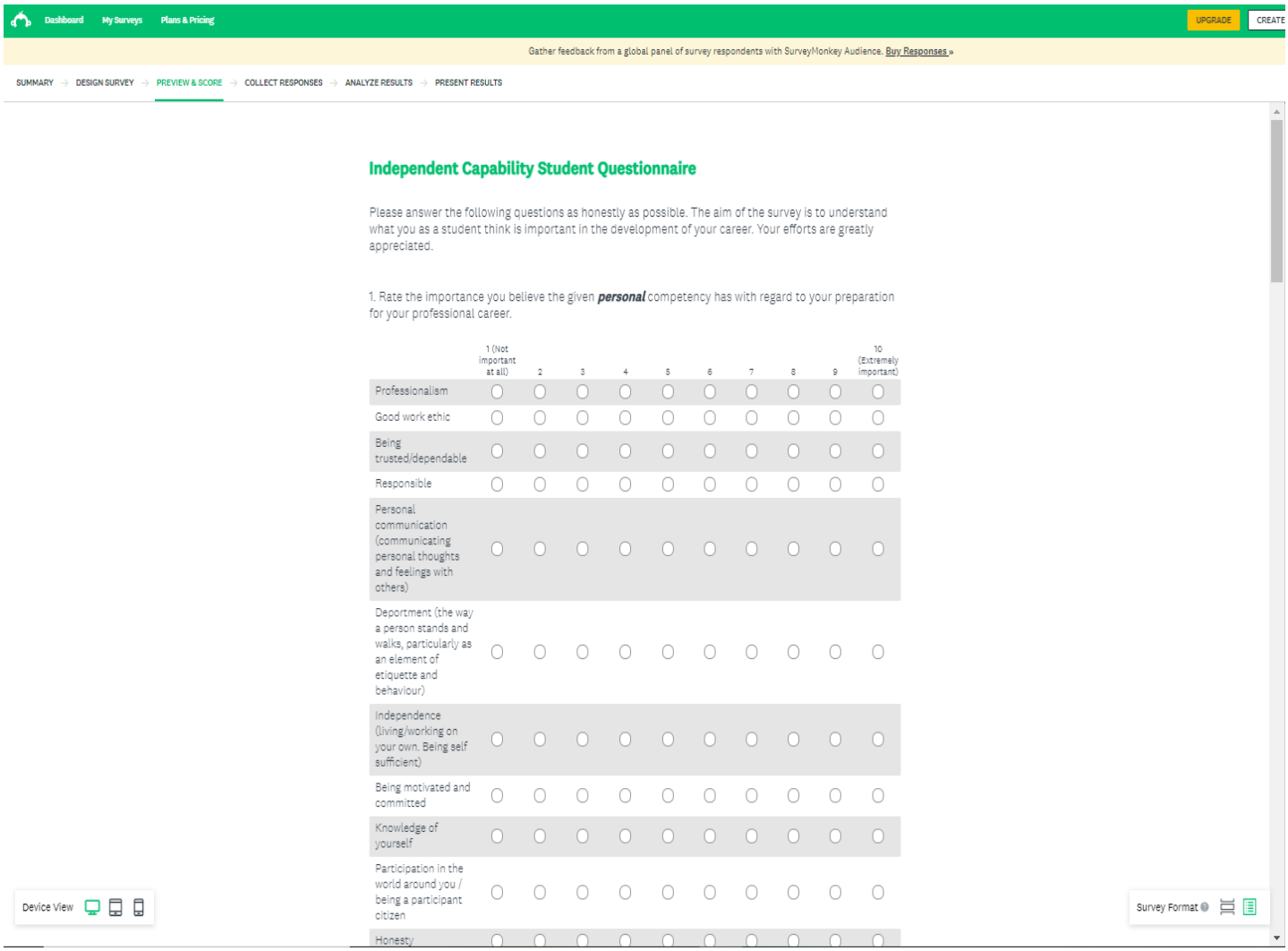
5. Please select the option that best represents how you feel the institution you are enrolled in develops the above mentioned competencies within its curriculum and student engagement.

- ○ Not at all – the institution does nothing to promote these competencies
- ○ Rarely – the institution makes mention of it but doesn't really promote its development
- ◉ Sometimes – the institution does discuss it and how it helps but not more than casual discussions
- ○ Mostly – the institution does promote the development of this competency but there is room for more to be done.
- ○ Yes – the institution focuses on the development of these competencies in all areas of education

6. Please rate the level at which your institution promotes and develop competencies within the curriculum and through student engagement within each competency category.

	1 (The institution does nothing to promote or develop these competencies)	2	3	4	5	6	7	8	9	10 (The institution continuously and successfully promotes and develops these competencies)
Personal										
Professional										
Cognitive										
Emotional										

Done (Thank you)


Dashboard
My Surveys
Plans & Pricing
UPGRADE
CREATE
Gather feedback from a global panel of survey respondents with SurveyMonkey Audience. Buy Responses »
SUMMARY → DESIGN SURVEY → PREVIEW & SCORE → COLLECT RESPONSES → ANALYZE RESULTS → PRESENT RESULTS
Independent Capability Student Questionnaire
Please answer the following questions as honestly as possible. The aim of the survey is to understand what you as a student think is important in the development of your career. Your efforts are greatly appreciated.
1. Rate the importance you believe the given personal competency has with regard to your preparation for your professional career.
1 (Not important at all)
2
3
4
5
6
7
8
9
10 (Extremely important)
Professionalism
Good work ethic
Being trusted/dependable
Responsible
Personal communication (communicating personal thoughts and feelings with others)
Deportment (the way a person stands and walks, particularly as an element of etiquette and behaviour)
Independence (living/working on your own. Being self sufficient)
Being motivated and committed
Knowledge of yourself
Participation in the world around you / being a participant citizen
Honesty
Device View
Survey Format

Appendix 4: Ethics Clearance Certificate

Wits School of Education

27 St Andrews Road, Parktown, Johannesburg, 2193 Private Bag 3, Wits 2050, South Africa. Tel: +27 11 717-3064 Fax: +27 11 717-3100 E-mail: enquiries@educ.wits.ac.za Website: www.wits.ac.za

24 July 2018

Student Number: 694722

Protocol Number: 2018ECE014D

Dear Martin Cameron

Application for Ethics Clearance: Doctor of Philosophy

Thank you very much for your ethics application. The Ethics Committee in Education of the Faculty of Humanities, acting on behalf of the Senate has considered your application for ethics clearance for your proposal entitled:

Independent Capability as a measurable concept: A Capabilities Approach to higher education in South Africa

The committee recently met and I am pleased to inform you that **clearance was granted**. However, there were a few small issues which the committee would appreciate you attending to before embarking on your research.

The following comments were made:

- Participant information sheet letters: correct the typo (missing a) "My name is Cameron Robert Martin and I am a PHD student in the School of Education at the University of the Witwatersrand." The supervisor may check this has been done.
- It is suggested that the PHEI's be offered a copy of the final report, on request.

Please use the above protocol number in all correspondence to the relevant research parties (schools, parents, learners etc.) and include it in your research report or project on the title page.

The Protocol Number above should be submitted to the Graduate Studies in Education Committee upon submission of your final research report.

All the best with your research project.

Yours sincerely,

M Mabeta

Wits School of Education

011 717-3416

Cc Supervisor: Dr. Tanya Bekker

Appendix 5: Information sheets and consent forms

TO THE SENIOR MANAGEMENT TEAM

Dear Sir/Madam

My name is Cameron Robert Martin and I am PHD student in the School of Education at the University of the Witwatersrand. I am doing research on Independent Capability as a measurable concept: A capabilities approach to higher education

My research involves trying to establish what the core competencies are that higher education representatives and students hold to be important in their own educational development. The research involves developing the concept of Independent Capability (IC – the ability to deal with unfamiliar problems in unfamiliar environments) and to establish what competencies it should be comprised of in a South African context. From the information gathered through interviews and questionnaires, a clear definition of IC can be made and the next step of the study is to develop an assessment tool that can help identify the levels of IC within a student.

The reason why I have chosen your institution is because the context of the study is within Private Higher Education Institutions (PHEIs) and more specifically within the more professional qualification context. Also, it is locally based which allows for face-to-face communication should the need arise.

I am inviting your institution to participate in this research. This will require access to some of your policies and documentation that deal with educational philosophies, policies and strategies as well as an interview with 2 members of the institution's staff such as a manager or lecturer. It would also require some of your students to complete a questionnaire.

You are under no obligation to agree, but it would be greatly appreciated if you do so. The research participants will not be advantaged or disadvantaged in any way. They will be reassured that they can withdraw their permission at any time during this project without any penalty. There are no foreseeable risks in participating in this study. The participants will not be paid for this study. The names of the research participants and identity of the institution will be kept confidential at all times and in all academic writing about the study. Your individual privacy will be maintained in all published and written data resulting from the study. I will be extremely flexible to your and any staff members, or students schedule and will make every effort to be minimally disruptive.

All research data will be destroyed between 3-5 years after completion of the project.

Please let me know if you require any further information. I look forward to your response as soon as is convenient.

Yours sincerely,

Cameron Robert Martin

Student number: 694722

Cameron.r.martin@gmail.com

0746778000

Consent Form

As a representative of _____(name of institution) I, _____(name and surname), _____ (job title / relationship with the institution) give consent for Cameron Martin (Student Number: 694722) to engage in academic research at the institution.

This includes:

1. Allowing Mr. Martin to access institutional documents and information pertaining to the explained research methodology including, but not limited to, the teaching and learning policy, assessment policy, and yearbook.
2. Allowing Mr. Martin to interview and audio record 2 representatives of the institution.
3. Allowing Mr. Martin to conduct questionnaires with 1st and 3rd year Bachelor and/or Diploma students.
4. Allowing Mr. Martin to conduct a pilot assessment with the 1st and 3rd year class at a later date.
5. Allowing Mr. Martin to ask for follow up information or interactions.

I do this knowing that all information will be kept confidential and anonymous in order to protect participants as well as that all participation is voluntary and at any time participants are allowed to decline participation.

_____ _____

Signature Date

INFORMATION SHEET STUDENT

Dear Student

My name is Cameron Robert Martin and I am PHD student in the School of Education at the University of the Witwatersrand.

I am doing research on Independent Capability as a measurable concept: A capabilities approach to higher education

My research involves trying to establish what the core competencies are that higher education representatives and students hold to be important in their own educational development. The research involves developing the concept of Independent Capability (IC – the ability to deal with unfamiliar problems in unfamiliar environments) and to establish what competencies it should be comprised of in a South African context. From the information gathered through interviews and questionnaires, a clear definition of IC can be made and the next step of the study is to develop an assessment tool that can help identify the levels of IC within a student.

Would you mind if I gave you a questionnaire that asked about how important you think certain competencies are in relation to your education? The questionnaire will not take longer than approximately 20 minutes and would greatly help my research. Remember, this is not a test, it is not for marks and it is voluntary, which means that you don't have to do it. Also, if you decide halfway through that you prefer to stop, this is completely your choice and will not affect you negatively in any way.

I will not be using your own name but I will make one up so no one can identify you. All information about you will be kept confidential in all my writing about the study. Also, all collected information will be stored safely and destroyed between 3-5 years after I have completed my project.

I look forward to working with you!

Please feel free to contact me if you have any questions.

Thank you

Cameron Robert Martin

Student number: 694722

Cameron.r.martin@gmail.com

0746778000

Student Consent Form

Please fill in the reply slip below if you agree to participate in my study

My name is: _____

Permission for questionnaire/test

I agree to fill in a question and answer sheet or write a test for this study. YES/NO

Informed Consent

I understand that:

- my name and information will be kept confidential and safe and that my name and the name of my institution will not be revealed.
- I do not have to answer every question and can withdraw from the study at any time.
- I can ask not to be audiotaped, photographed and/or videotape
- all the data collected during this study will be destroyed within 3-5 years after completion of my project.

Sign_____ Date_____

Information Sheet for students sent through institution email

Hello,

My name is Cameron Martin and I am a PHD student from WITS University and I really need your help. I am trying to gain insight into the valuation of certain competencies that form a concept called Independent Capability.

In order to do that I am asking you to take 6 minutes to click the link below or scan the QR code and take my survey. It is completely optional and will in no way affect any of your academic results or grades. It is purely your honest opinion and how you feel about certain characteristics with respect to your career development and it would greatly help my research.

https://www.surveymonkey.com/r/MR6X7S3

As I said this is completely voluntary and mean that you don't have to do it. Also, if you decide halfway through that you prefer to stop, this is completely your choice and will not affect you negatively in any way.

You will not need to provide any personal details but any and all information will be kept confidential in all my writing about the study. Also, all collected information will be stored safely and destroyed between 3-5 years after I have completed my project. By choosing to take the survey you are giving informed consent for me to use your provided answers.

Thank you so much for your help. It is greatly appreciated.

Cameron Martin
WITS Student number: 694722
Ethics Protocol Number: 2018ECE014D

INFORMATION SHEET PHEI REPRESENTATIVES

Dear Representative,

My name is Cameron Robert Martin and I am PHD student in the School of Education at the University of the Witwatersrand.

I am doing research on Independent Capability as a measurable concept: A capabilities approach to higher education

My research involves trying to establish what the core competencies are that higher education representatives and students hold to be important in their own educational development. The research involves developing the concept of Independent Capability (IC – the ability to deal with unfamiliar problems in unfamiliar environments) and to establish what competencies it should be comprised of in a South African context. From the information gathered through interviews and questionnaires, a clear definition of IC can be made and the next step of the study is to develop an assessment tool that can help identify the levels of IC within a student.

The reason why I have chosen your institution is because the context of the study is within Private Higher Education Institutions (PHEIs) and more specifically within the more professional qualification context. Also, it is locally based which allows for face-to-face communication should the need arise.

Would you mind if I conducted an interview with you to discuss your view on education, specifically with the development of professional competencies. The idea is to explore what key competencies you believe students should be developing in higher education in general and specifically in your institution. I would also ask if I could audio record the interview for no other reason than to be able to go back to the interview for clarity when analyzing the findings.

Your name and identity will be kept confidential at all times and in all academic writing about the study. Your individual privacy will be maintained in all published and written data resulting from the study. All research data will be destroyed between 3-5 years after completion of the project. You will not be advantaged or disadvantaged in any way. Your participation is voluntary, so you can withdraw your permission at any time during this project without any penalty. There are no foreseeable risks in participating and you will not be paid for this study.

Please let me know if you require any further information.

Thank you very much for your help.

Yours sincerely,

Cameron Robert Martin

Student number: 694722

Cameron.r.martin@gmail.com

0746778000

PHEI Representative Consent Form

Please fill in and return the reply slip below indicating your willingness to be a participant in my voluntary research project called:

I, _____ give my consent for the following:

Permission to be audiotaped

I agree to be audiotaped during the interview or observation lesson YES/NO

I know that the audiotapes will be used for this project only YES/NO

Permission to be interviewed

I would like to be interviewed for this study. YES/NO

I know that I can stop the interview at any time and don't have to

answer all the questions asked. YES/NO

Informed Consent

I understand that:

- my name and information will be kept confidential and safe and that my name and the name of my institution will not be revealed.
- I do not have to answer every question and can withdraw from the study at any time.
- I can ask not to be audiotaped, photographed and/or videotape
- all the data collected during this study will be destroyed within 3-5 years after completion of my project.

Sign_____ Date_____

Appendix 6: Semi-structured Interviews Competency table

There were 9 interviews across 5 PHEIs. Each transcript was coded for four categories of competency.

- **Personal – competencies regarding the development of personality and character**
- **Professional – competencies regarding their ability to succeed in their desired professional career or industry**
- **Cognitive – competencies regarding the intellectual capacity and ability of the student to utilise knowledge**
- **Emotional – competencies regarding the emotional development and emotional management of the student.**
- **Other – a competency that does not fit the previous 4 descriptions or perhaps fits in 2 or more and requires further investigation and discussion**

Personal (green)	No. of instances	Professional (red)	No. of instances	Emotional (Blue)	No. of instances	Cognitive (Pink)	No. of instances	Other / Unclassified (grey)	No. of instances
Professionalism	2	Professional Writing	2	Emotional Intelligence	2	Critical thinking / evaluating	5	Teamwork: both a personal and professional sense	10
Good work ethic	2	Time management	7	Emotionally prepared		Analysing skills	8	Communication (personal and Professional context)	7
How to carry yourself at work/ deportment	4	Managing themselves		Consideration for people	2	Intellectual integrity – sourcing and using information		Conflict resolution (personal and professional sense)	3
Trusted		Academic writing / reading; Academic literacy	9	Empathy	3	Reasoning	4		

Dependable		**Presentation skills / sharing of knowledge**	**3**	**Kindness**		**Generate solutions / problem solving**	**7**		
Participate and engage with the world around you / citizenship	**6**	**Good understanding of business**	**2**	**Maturity**	**3**	**Connect the dots (Linking concepts together)**	**5**		
Self-confidence	**3**	**Translate between business technical language**		**Emotional Stability**	**2**	**Good Decision making**	**3**		
Responsible	**6**	**Prioritizing tasks**		**Separate personal from professional issues**		**Logical thinking**	**2**		
Relating to others	**2**	**Computer literacy**	**3**	**Stress management**	**2**	**Questioning / investigative**	**3**		
Working on your own / independence / self sufficient	**3**	**Be able to deliver deliverables**		**Deal with criticism /** **Develop a "tough skin"**	**2**	**Creative thinking**	**3**		
Commitment		**Task/role flexibility**	**2**	**Appropriate responses to various situations**	**2**	**Having the required knowledge**			
Courteous	**2**	**Competence in specific area of focus**	**4**	**Nurturing**		**Application of knowledge in the real world**	**3**		
Know yourself	**2**	**Clear expectations**	**4**	**Caring**	**2**	**Develop and justify own opinions**	**3**		

Honesty		**Listening**				**Reflexive thinking**			
Willingness to learn		**Recognizing corporate culture**				**Independent thinking**			
Self-discipline	**3**	**Numeracy**	**2**			**Preparation for higher levels of academia / qualifications**			
Motivated	**3**	**Contribute to the economy**				**Having a variety of knowledge**			
Leadership		**Conduct themselves in an interview**				**Systems thinking**			
Respect		**Entrepreneurship**				**Attention to detail**			
		Enjoyable to work with							
		Sell themselves / self marketing							