UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

DATA MANAGEMENT PLAN

0. Project name

Teacher Choices in Action

1. Description of the data

1.1 Type of study

Background and purpose of the research

Due to the Covid-19 pandemic, it is unlikely that student teachers will be able to complete their work-integrated learning (WIL) or teaching practice in schools in 2020. A team of teacher educators from a range of universities has developed an online, practice-based module that provides an alternative to a school-based TP placement across the sector, as and where required. This module, called "Teacher Choices in Action", presents a unique opportunity to conduct systematic research into how preservice teachers, at various stages of their ITE programmes, describe and interpret the teaching practices they observe. By collecting data from the student teachers, there is an opportunity for systematic, cross-sectional research to investigate how these preservice teachers develop their reasoning in practice during their professional preparation programmes.

Aims of the research

The specific aims are:
1. To understand what conceptual tools preservice teachers use when describing and analysing teaching practices.
2. To understand how students who are at different stages of their initial teacher training analyse teaching practices differently.
3. To understand how the preservice teachers' description and analysis of teaching practices changes after completing the module called "Teacher Choices In Action".
4. To understand what the teacher, educators and tutors think about the form and substance of the module and its underpinning pedagogical principles.
5. To use the findings to strengthen the teaching practice component of initial teacher education programmes

In order to achieve these aims, the following research design will be used:

1. The students will describe and analyse a video-recorded lesson at the beginning of the module, which will generate data to meet this first aim.
2. The same description and analysis will enable us to ascertain how teachers who are at different stages of their ITE training analyse teaching practices differently.
3. After completing the module, students will describe and analyse the same video-recorded lesson. This will enable researchers to ascertain how their description

and analysis has shifted after completing the module.

4. Online qualitative questionnaires will generate data to enable the researchers to understand the perspectives of teacher educators and tutors on the online module and its underpinning principles.

5. All the findings will come together to meet the final aim of using the study to strengthen teaching practice component of initial teacher education programmes

Research questions

The research project is guided by the following overarching question:
How do students think about and respond to teaching practices during their preservice teacher education programme?
The research question has the following sub-questions:

1. What aspects of teaching do South African preservice teachers focus on when observing and analysing teaching? What do they not focus on? What does this tell us about the conceptual tools, experience and ethical orientations they recruit when analysing teaching practices?
2. How do preservice teachers at different ITE stages think of analysing teaching differently? What does this reveal about developing their professional identity, knowledge and thinking?
3. Did preservice 'teachers' analysis of lessons shift after a module on pedagogical reasoning in practice? If so, how?
4. What are teacher 'educators' and 'tutors' reflections on the form and substance of the module content and its underpinning principles?
4. How can the findings of this study be used to strengthen the teaching practice component of initial teacher education programmes?

1.2 Types of data

The dataset comprises the responses of student teachers participating in the Teacher Choices in Action module have written during their coursework, their evaluation and reflection on the module and the evaluation of staff who have tutored and assessed 'students' work.

1.3 Format and scale of the data

Our data includes:
Tabulated data in a Microsoft Access Database
Size: 1 GB
Current data:
40 000 records
16 000 students

Expected growth:
20 000 new participants per annum, 0,5 GB of data to be added annually.

2. Data collection / generation / Sharing

2.1 Methodologies for data collection / generation

The empirical data collected in the study will be preservice 'teachers' responses to various tasks in the Teacher Choices in Action module. These include their biographical details, descriptions and analysis of recorded lessons they observe, and a rationale for the design of a lesson that they produce. All tasks are submitted as an e-portfolio during their participation in the module.

2.2 Data Sharing Process

1. Complete request template.
2. Submit to Lee.Rusznyak@wits.ac.za
3. evaluate, process data and share

2.2 Data quality and standards

Supplementary to the above (2.1), any use of the data is subject to maintaining the quality as prescribed in the methodologies above.

3. Data management, documentation and curation

3.1 Managing, storing and curating data.

A Microsoft Access database has been set up to pull together 'students' work, institution, programme, and course. It allocated a unique identifier to each student and each piece of work. The queries in the database enable the PI to extract anonymised datasets with all identifying details removed.

Storage;
Working copies are stored on the 'PI's laptop, which is password protected.
A backup copy of the database containing all data will be held on the Wits Core.
New data will be added annually.

3.2 Metadata standards and data documentation

We will utilise metadata, a codebook and a specially developed specific vocabulary for this project based on standardised variables.

TABLE RELATING TO PARTICIPANT DETAILS

Field	description
TCIA Identifier	*Unique automatically generated code that identifies each respondent in the data provided to researchers and thus a means of maintaining anonymity.*
Year	Year in which course was complete
student number	Student number from the institution – needed in case permission is withdrawn – Not released in data provided to researchers.
Institution	Institution at which student is registered for an initial teacher education qualification
Programme	The degree, diploma or certificate for which participant is registered
Phase	The level of the schooling system for which the preservice teacher will teach
Year of Study	Indicates how far they are through the initial teacher education programmes
Subject 1 Subject 2	Teaching subjects of secondary school majors
Surname	Not provided to researchers, but essential to keep in case of query
First name	Not provided to researchers, but essential to keep in case of query
Consent to participate	Record of informed consent to participate in the study

TABLES – RESPONSES OF PARTICIPANTS TO TASKS

TCIA IDENTIFIER	Unique automatically generated code that identifies each respondent in the data provided to researchers and thus a means of maintaining anonymity.
Student email	Mechanism for linking student responses to the TCIA unique identifier – not provided to researchers who use the dataset.
Analysis of analogy	Student responses to task in UNIT 1
Unit 1 Analogy	Student responses to task in Unit 1
Journey to teaching	Student responses to task in Unit 1
Teaching & Learning in my community context	Student responses to Discussion Forum (Unit 2)
Lesson Observation 1	Student analysis and evaluation of a recorded lesson
Lesson Observation 2	Student analysis and evaluation of a recorded lesson
Lesson Observation 3	Student analysis and evaluation of a recorded lesson
Lesson Observation 4	Student analysis and evaluation of a recorded lesson
Lesson Observation 5	Student analysis and evaluation of a recorded lesson
Identifying exclusion	Student responses to a task that asks them to state whether various exclusionary features are pedagogically significant or not. Task in Unit 5
Pedagogic responses to exclusion	Students rank given options from most to least appropriate pedagogic response for inclusive teaching
Response to Teacher Patricia	Students' response to a question in which they provide guidance to a teacher who demonstrates exclusionary attitudes in her teaching and planning approaches.
3 most valuable	Students responses to the three most valuable aspects of the module
3 least valuable	Students responses to the three least valuable aspects of the module
Keep the same	What students would suggest stays the same for future cohorts
Change for future	What student suggests should be changed for future cohorts
Advice for others	The advice participant would give to another student about to begin the module
Comments	Anything the participant would like to say about the module
Reflections	Responses from participants about relevance to subject/ phase specialisation, context and articulation with coursework

The Tables of data are stored in a Microsoft Access database, designed by Prof Lee Rusznyak (Project leader). Queries have been written that links the required empirical data of participant responses with the required student details, such as their institution, programme, year of study and phase/subject specialisation.

The Toggle filter can be used to extract the exact dataset required by researchers. For example, if Lesson Observation Report 4 are required for Foundation phase students in their third year of study from a particular institution, the Queries link these fields, and the Filter enables the isolation of the dataset. It provides the researcher with anonymised data from participants who have consented to participate in the study.

The data is provided to the researcher in the form of an anonymised spreadsheet with all required parameters.

3.3 Data preservation strategy and standards

We will reserve the data set for teaching purposes and future research. The data will be housed in the Wits Core lab for 3-5 years, with the metadata made available on the institutional repository - http://wiredspace.wits.ac.za/handle/??? *–(to be defined when needed)*

4. Data security and confidentiality of potentially disclosive information

4.1 Formal information/data security standards

The University of the Witwatersrand has a formal data classification policy (henceforth Research Data Management policy), ICT acceptable use policy, a cloud policy, and an open access policy.

Operationally, research data is managed according to best practices outlined by the eResearch Office.

We will also abide by the South African 'government's POPI (Protection Of Personal Information) Act (2013).

Reference is made in the 'University's Information Classification and Handling Policy to ISO27001 International Information Security Standard and MISS.

4.2 Main risks to data security

Researchers on this project are governed by the University of the 'Witwatersrand's HREC (non - Medical) guidelines. This study is classified as a low-risk study and approved with Protocol H19 09 47.

Researchers will receive only anonymised datasets with automatically generated participant identifiers.

5. Data sharing and access

5.1 Suitability for sharing

Yes. As per the Data Sharing Agreement

5.2 Discovery by potential users of the research data

The dataset will be available to staff members and postgraduate students from participating institutions. The published research will be loaded onto the institutional repository and made available to funders (DHET and EU) through publications, conference papers and published book chapters/ books.

5.3 Governance of access

The 'University's data management committee will oversee the 'PI's data management protocols. The PI will review applications for access to the dataset, and these will be reported annually to the Teacher Choices in Action Governance Steering Committee (which has been formally constituted and contained stakeholder members, including representatives from the Department of Higher Education & training; South African Council of Educators; University of the Witwatersrand; representatives from other Higher Education Institutions; The Wits School of Education Business Manager).

Interested users will need to submit a research proposal to the PI, who in turn shall present affiliated studies to the Teacher Choices in Action Governance Steering Committee.

The data receivers are researchers who wish to participate in the research dimension of the Teacher Choices in Action project. These are either staff members or postgraduate students registered at a participating HEI prescribed.

The PI may invite specific collaborators to access the data.

5.4 The study 'team's exclusive use of the data

We will reserve the dataset for teaching purposes for a period of 8 years after collection. However, within this time period, we are open to sharing the data with interested postgraduate students and collaborators who fall under the 'University's ethical clearance provisions.

5.5 Restrictions or delays to sharing, with planned actions to limit such restrictions

We will impose a 3-5 year embargo period on access to the data by external users. Beyond

this period, we will share transcripts from the dataset in an anonymised format, but not the original recordings. This decision is necessary due to participant confidentiality and the potential sensitivity of some of the data. Strategies to limit restrictions will include anonymised or aggregated data and gaining participant consent for data sharing. Consent procedures will include provision for data sharing to maximise the value of the data for wider research use while providing adequate safeguards for participants. As part of the consent process, proposed procedures for data sharing will be set out clearly in the participant information sheets.

5.6 Regulation of responsibilities of users

The PI shall ensure that a Data Sharing Agreement is issued and signed by appropriate authorities before data are released or analyses are performed on behalf of the requester. Data-sharing agreements will prohibit any attempt to (a) identify study participants from the released data or otherwise breach confidentiality, (b) make unapproved contact with study participants.

6. Responsibilities

The Principal Investigator, Prof Lee Rusznyak, is responsible for study-wide data management, data security, quality assurance, and metadata generation (as overseen by the PI).
The University of the Witwatersrand Library will assist with data management and metadata generation.
eResearch will assist with secure storage.

7. Relevant institutional, departmental or study policies on data sharing and data security

Policy	**URL or Reference**
Data Management Policy & Procedures	University of the Witwatersrand Data Classification Policy Wits Records Management Policy
Data Security Policy	Wits Information Security Policy
Data Sharing Policy	Wits Intellectual Property Policy
Institutional Information Policy	*http://intranet.wits.ac.za/exec/registrar/Policies/Policy%20-%20Information%20Classification%20and%20Handling%20(2019-01).pdf#search=data%20classification* – University's Information Classification and Handling Policy *http://www.wits.ac.za/media/wits-university/staff/documents/Acceptable%20Use%20Policy.pdf* – 'University's Acceptable Use Policy *https://libguides.wits.ac.za/ld.php?content_id=25372137*
Other:	The University of the Witwatersrand and the University of XXXXXXXX have an MOU in place.

8. Author of this Data Management Plan (Name) and, if different to that of the Principal Investigator, their **telephone & email contact details**

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