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## **Inside Mentor-Mentee Meetings In Pre-Service Teacher School-Based Teaching Practice In Zimbabwe.**

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*Abstract: Mentor-mentee meetings are a critical aspect of student teacher mentoring during teaching practice (TP) as they significantly contribute to the success of the whole mentoring process and consequently to the positive accomplishment of the entire practicum. This study contributes to debates on mentor-mentee meetings given the limited research on this phenomenon. By investigating the kinds of knowledge student teachers gain from such meetings, the findings may influence researchers to investigate other aspects of mentor-mentee meetings.*

*The study sought to explore from the student teachers' perspectives, the domains of knowledge that they gain from mentoring meetings during residential TP. A qualitative approach which employed open-ended questionnaires was used to generate data from 16 student teachers: seven men and nine women in two education districts. Students indicated that they had good relationships with their mentors, and held formal meetings weekly, fortnightly or monthly. They also reported gaining general pedagogical knowledge, pedagogical content knowledge, curriculum knowledge, knowledge of learners, and knowledge of educational contexts. Three students experienced ineffective mentoring, as such had limited benefits from mentoring processes and most likely from the practicum. Knowledge of what to teach, how to teach it as well as appropriate strategies for particular topics, the kinds of students and their specific settings often merge into what student teachers are expected to learn in teacher preparation inclusive of residential practicum. Comprehensive, prolonged, on-going mentor training workshops would expose mentors to the entire essence of mentoring and the centrality of formal mentor-mentee meetings not only for student teacher TP mentoring, but also for mentor growth and rejuvenation in their practice.*

### **Introduction and Background**

Teaching Practice (TP) is a period when pre-service teachers go into the field to gain practical and professional experience, through 'on-spot' guidance and supervision, interactions and formal meetings with qualified, experienced practicing teachers (Mukeredzi & Mandrona,

2013). TP is a highly esteemed education custom, essential to teacher development and socialization as student teachers (herein called students) go into schools to gain practical and professional learning and experience (Grisham, Ferguson & Brink, 2004; Bloomfield, 2010; Johnston, 2010). Students view TP as paramount in gaining teacher professional knowledge and competence, and offering a ‘protected’ opportunity for experimentation and professional socialization with (mentors) and within the profession (Leshem, 2012). The period allows students to translate the educational principles and theories acquired in college or university into real classroom practice and through experimentation during teacher preparation (Kiggundu, 2009). Not only will they practice how to teach, but will also gain professional knowledge about teaching while learning to teach. Johnston (2010) contends that, TP is a widely acknowledged and time honoured educational tradition. Often viewed as a ‘rite’ of passage, TP maybe the most essential part of teacher development in Initial Teacher Education given that it offers trainees a variety of experiences and opportunities for attaining professional growth and development through observation, practice, reflection, meetings and interactions.

Globally, a TP component is understood as fundamental to teacher preparation as “a good teacher education programme must seek to assist individual teachers to grow and develop as people, provide them with the necessary skills and professional abilities to help them become effective teachers” (Fafunwa, 2001, p. 81). Concomitantly, Leshem, (2012) and Marais and Meier (2004) concur that field experience is the heart of students’ professional training which is too important to be left to chance. Thus, student TP is underpinned by a move towards development of competent teaching professionals as they get opportunities to learn in and from situations and contexts commensurate with their eventual workplace (school, and classroom). TP also offers students space to gain pedagogical and management skills vital for effective lesson coordination (Aderibigbe, 2013). The TP process signifies a personal revolution in the students’ knowledge of themselves as teachers; of management of the teaching/learning process; of school cultures, and the education system as a whole (Caires & Almeida, 2005).

However, professional learning during TP effectively occurs with supervision, support and guidance from experienced teachers. Such school-based learning would involve among others, acquisition of skills, techniques and knowledge of teaching through classroom-based practice with learners, meetings and/or interactions with experienced and qualified teachers acting as mentors. This article reports the kinds of knowledge gained by pre-service teachers (from one Zimbabwean University) through mentor-mentee meetings during school-based practicum. The study addresses the question: ‘What kinds of knowledge do student teachers gain through mentoring meetings’?

The next section gives a synopsis of literature on mentoring. A brief discussion on Teacher Education in Zimbabwe and the B.Ed. programme at the Great Zimbabwe University (GZU) follows. The methodology is discussed followed by findings. A discussion and conclusion wrap up the paper.

## Literature Review

Mentoring has generally been conceived as a one-to-one relationship between a competent and experienced teacher (mentor) and a novice or trainee (student teacher) to enable the trainee to grow and develop professional teaching competencies (Maggioli, 2014). However, given the many shortcomings of this conception, for instance perpetuating conventional teaching

practices and suppressing mentee's convictions related to student-centred pedagogies (Awaya, McEwan, Heyler, Linsky, Lum & Wakukawa, 2003; Gershenfeld, 2014), more collegial, dynamic and reciprocal conceptions have emerged. Hence, mentoring is now understood as a mutual relationship where both mentor and mentee benefit. Ambrosetti and Dekkers (2010) asserts that mentoring is a worthwhile exercise which requires effort, commitment, and time of both the student teacher and the mentor if effective professional learning is to be achieved. Stressing the value of mentoring, du Plessis, Marais, Van Schalkwyk and Weeks (2010, p.328) argue that "if, as research indicates, practice teaching is the most single powerful intervention in teachers' professional preparation, then mentoring is the single most powerful process of such intervention." Mentors should, therefore, build strong relationships of trust and goodwill with student teachers to enhance their professional learning and growth. They are expected to model commitment, efficiency, responsibility and enthusiasm, given that they are the most significant and powerful individuals who influence the student teacher's development of orientation, disposition, conceptions and classroom practices (Malderez, 2009; Kettle & Sellars, 1996). Thus, mentors should assume multi-faceted roles as guide, coach, supervisor, counsellor, role model, nurturer, advisor, critic and supporter (Maphosa, Shumba & Shumba, 2007).

Mentoring from the Zimbabwean context is regarded as a vital component of teacher preparation where the four models of teacher development are integrated and consolidated:

(i) *applied science model* which offers space for application of theory learnt in college or university; (ii) *practical orientation model* where practice teaching is viewed as a source of professional knowledge about teaching and a means of learning to teach; (iii) *personalistic development model* where emphasis is on teaching to learn rather than learning to teach; and the (iv) *critical perspective model* which emphasizes enquiry, experimentation and reflection (Cavanagh & Garvey, 2012; Darling-Hammond, 2006; Johnston 2010). From the GZU perspective, mentoring should enable student teacher professional learning through activities that include:

- mentor observation of student teacher lessons;
- mentor provision of feedback – offering constructive criticism and discussing student teacher's performance to promote reflective practice;
- mentor role modelling and instructing – setting a good example of professional competences and behaviour, providing specific instructions on how to teach and carrying out tasks specifically for the student teacher to observe;
- counselling and promoting – supporting the student teacher professionally, personally and socially, breathing vigour into them and encouraging trial and error; and
- mutuality and collegiality – mentor being an equal partner and critical friend where mentor and mentee benefit from mutual support and constructive criticism of student teacher's teaching (Ambrosetti & Dekkers, 2010; Heikkinen, Wilkinson, Aspfors & Bristol, 2018; Maggioli, 2014).

Mentoring conversations which may be formal or informal thus, become integral, if effective mentoring of student teachers is to occur (Heikkinen, Wilkinson, Aspfors & Bristol, 2018; Strong & Baron, 2004). These conversations are vital for the following purposes:

1. Setting goals and boundaries for interactions;
2. Promoting respect and rapport as they provide space for an open communication;
3. Acting as spring board and reference point for improving subsequent mentoring dialogues; and

4. Facilitating understanding that relationships are based on momentous conversations where individuals may perceive issues differently (Heikkinen, Wilkinson, Aspfors & Bristol, 2018; Strong & Baron, 2004).

Consequently, as Maggioli (2014) notes, good mentoring relationships are difficult to establish without mentor-mentee conversations.

Mentor support and a good relationship with the trainee are indispensable during TP (Marais & Meier, 2004) as this enhances students' opportunities to learn to teach within teaching/learning contexts (Ambrosetti & Dekkers, 2010). These authors also posit that such learning effectively occurs when mentors make time for lesson modelling, student lesson observations, engaging students in planned dialogues and discussions built around critical and constructive feedback. These authors however discovered that some mentors portray limited preparedness, do not offer effective guidance nor devote time for mentor-mentee conversations.

Maggioli (2014) posits that mentoring relationships are more successful when convened in naturalistic environments where interactions are based on mutual understanding and collegiality. Such interactions become more effective when formal, and planned around specific issues for discussion. Silbert and Verbeek (2016) suggest that effective mentorship conversations involve a willingness to devote time for the professional dialogues, conversing, listening, and answering questions. Thus, the mentoring meetings among others, require formal, unhurried discussions between the mentor and mentee. Hence the process has a lot to do with dialogical mentor-mentee engagement, where both parties should display commitment to the dialogue (Mukeredzi, 2017). Hill (2012) asserts that often mentors generously volunteer their time and effort to share their career/field experiences of professional practice, expertise, and knowledge. The value of these formal mentor-mentee meetings and interactions cannot be over-emphasized, and should not be taken for granted (Zhang, 2014). Thus, informal interactions may be restricted to 'on-spot' guidance on issues requiring to be addressed 'here and now'.

Mentoring is designed to facilitate students' career development as it is based on the interaction of the two parties (Maggioli, 2014). Sharing professional information and experiences in mentor-mentee meetings is not only based on how people interact, but is also enhanced by setting aside and respecting the time allotted to it. Effective mentoring meetings involve feelings and emotions, and are based on joint engagements built on good relationships and for benefiting both mentor and mentee (Gaddis, 2012). Hudson (2013) discovered that mentoring conversations advanced student teachers' pedagogical knowledge, improved their communication skills and classroom leadership roles. Hudson goes on to say the process should therefore be designed to build high levels of student expertise, including their content knowledge, knowledge of their learners, of their teaching contexts, and classroom practices. Hudson (2016) adds that as space for professional growth, mentor-mentee meetings empower student teachers to think about expanded ways of understanding, engaging and delivery of the school curricula. Further, through mentoring conversations in particular subsequent to lesson observations, student teachers benefit through critical self-reflection and learning from their own practice. Thus, mentor-mentee meetings are a critical aspect of TP which significantly contributes to the success of the entire mentoring process.

## **Teacher Qualifications and Teacher Education in Zimbabwe**

In Zimbabwe, teacher education resides in the Ministry of Higher and Tertiary Education (MHTE) and occurs in colleges and universities. The sector is composed of two programmes: Diploma in Education acquired from Teachers' Colleges, and the Bachelor of Education degree attained from universities. Trainees can train either as primary or high school teachers in each of these programmes. The duration of teacher education is three years in teachers' colleges and four years in universities. Entry qualifications in teachers' colleges are five subjects that include Mathematics and English passed at O Level (equivalent Grade 11). However, those who would have gone through A-Level (Form 6 or Equivalent Grade 13) but failed to achieve the required points for university entry may be offered a two-year teacher training programme in the teachers' colleges. After graduation new teachers are usually deployed to rural schools as it is in these contexts that there is the greatest need for teachers (Heeralal, 2014).

### **The Great Zimbabwe University Bachelor of Education Degree**

The Great Zimbabwe University (GZU) B. Ed Teaching degrees for primary and high school teaching are four years in duration. High school teachers specialize in two subject areas while primary school teachers specialize in either early childhood education (ECD) (Foundation Phase) or in generic primary school teaching where teachers learn all curriculum subjects for Grades 4 – 7.

The GZU places student teachers on TP in schools for a year during their third academic year. While students are expected to participate in all school activities, they are required to teach eighteen lessons per week to allow them time for research and lesson observations. The students are required to develop and maintain TP files for lesson plans, schemes, extension work, remedial work and mark records.

Mentor selection is the responsibility of School Heads based on teachers' experience, proficiency and effectiveness. The selected mentors are expected to support, guide and assist students during TP (Manwa, Mukeredzi & Manwa, 2016). Mentors are expected to hold pre-lesson and post lesson observation conferences with their mentees for student lessons observed by the mentor, and also for mentor lessons observed by student, to evaluate, reflect on and discuss the lessons so that the student can learn from both the mentor's and their own teaching (Mukeredzi, 2017). As well, mentors are also expected to hold formal mentor-mentee meetings outside lesson observations.

Before commencing TP, the university conducts one-day mentor training workshops to expose mentors to the institution's expectations of student mentoring during TP. The content of such workshops usually covers: university and students' expectations of mentoring on TP, TP assessment and grading system, scheming, preparation and planning formats. Given the expenses involved in running these training workshops (transport, subsistence, seating allowances paid by university), many mentors are often left untrained.

## Conceptual Framework

The study investigated the kinds of knowledge that pre-service teachers gained through mentoring meetings. The paper draws on concepts related to teacher knowledge: Shulman (1987), Grossman (1990), Cogill (2008), and Rahman, Scaife, Yahya and Jalil (2010). Shulman (1987) categorized teacher professional knowledge for teaching into seven domains: Content knowledge; General pedagogical knowledge; Pedagogical content knowledge; Curriculum knowledge; Knowledge of learners; Knowledge of educational contexts; and Knowledge of educational end purposes and values. These domains are discussed in turn below starting with content knowledge.

From Shulman's seven categories of knowledge, Content knowledge (CK), general pedagogical knowledge (GPK), pedagogical content knowledge (PCK) and curriculum knowledge are viewed as the cornerstone of teacher knowledge domains for teaching (Cogill 2008; Grossman, 1990). CK is "the knowledge, understanding, or skill to be learned" (Shulman 1987, p. 8) which includes the knowledge of subject matter and substantive and syntactic structures of that subject. The substantive structures are the theories underpinning the discipline which influence the organization and questions that guide the discipline. On the other hand, syntactic structures refer to rules, principles, standards or norms of evidence in a discipline and how knowledge claims are evaluated and accepted by discipline experts (Grossman, 1990). In other words, content knowledge are the major concepts and facts in a subject and the relationships among them which the teacher should put across to students drawing on their general pedagogical knowledge.

With regard to GPK, Shulman (1987) views this domain as involving teaching principles, strategies, and rules of classroom management and organization that transcend subject matter. This domain of knowledge encompasses general knowledge, beliefs, skills of teaching, and principles of instruction like learning time, wait time, small group instruction, and knowledge and beliefs about aims and purposes of education (Cogill, 2008). In other words, this is knowledge of 'how to' conduct and manage the learning situation which includes explicit aspects like lesson preparation (including structuring objectives), understanding how children learn, student motivation, classroom management and personal dispositions like teacher-student relations, and the value of confidence (Rahman et al., 2010).

In view of curriculum knowledge, while Cogill (2008) locates this realm of knowledge as a distinct domain, Grossman (1990) regards curriculum and instruction as aspects of both GPK and PCK. Curriculum knowledge are the teacher's 'tools of the teaching trade' like their knowledge of teaching materials or media for use in the classroom. It is that knowledge which should be taught to particular groups of students which draws on the teacher's understanding of children's learning potential, their syllabi, preparation documents and schedules, assessment syllabi, local and or contextual requirements. Some education systems may include what should be taught or nationally examined which then requires understanding the forms and purposes of assessments and how different frames (social, individual, criterion-based) impact students' learning.

Pedagogical content knowledge on the other hand is regarded by Shulman (1987) as an amalgam of content and general pedagogy, which transcends subject matter knowledge. This therefore is a dimension of subject matter knowledge for the practice of teaching, which is uniquely a territory of teachers.

Pedagogical content knowledge identifies distinctive bodies of knowledge for teaching.

It represents blending of content and pedagogy into an understanding of how particular topics, problems or issues are organized, represented, and adapted to meet the diverse interests and abilities of learners, and presented in instruction. (Shulman, 1987. p4).

It is thus knowledge of how to teach a particular subject which enables teachers to make content accessible/comprehensible to students for instance using simple examples, clear analogies, presenting material in interesting and motivating ways. Such knowledge also includes the knowledge of most frequently taught topics in a subject, the most powerful equivalences, comparisons, illustrations, examples, explanations and demonstrations. Simply put, this is about interpreting, manipulating and representing subject matter in a way that makes it understandable for students (Bertram, 2011; Charalambous, 2016; Grossman, 1990). Dewey, quoted by Grossman, refers to this as “psychologizing the subject matter for teaching” (p.6). PCK is also about comprehension of what makes some topics easier or more difficult to learn, and the conceptions and mis-conceptions that students from different backgrounds and experiences may bring into the classroom to the learning of frequently taught concepts or topics (Shulman, 1987). Hence, without appropriate prior CK, teachers may not make the appropriate choices of strategies, resources and pupil activities.

Grossman (1990) includes an aspect of students and their learning under GPK, and knowledge of students’ understanding under PCK. However, knowledge of learners and their characteristics is a distinct domain (Shulman, 1998). This knowledge generally comprises two elements: (1) empirical or social knowledge of learners, i.e. what children of a particular age range are like, their classroom and school behaviours, their social characteristics, their nature, interests, and how factors like weather or other exciting events influence their learning and behaviour, and the nature of their pupil-teacher relationships; (2) Cognitive knowledge of learners which encompasses knowledge of child development theories which informs teaching practice, and context related knowledge which develops from regular contact with these students regarding what they know, can or cannot do, and what they are likely to comprehend and master (Rahman et al., 2010).

In addition, there is the knowledge of educational contexts which involves knowledge of the contexts pertaining to pupils’ learning: the classroom, school, community, the education system and society at large (Cogill, 2008). In other words, this ranges from specific classrooms and schools, the school catchment area and wider community, including national and international contexts of current and emergent educational issues like globalization, or use of Information Communication Technologies to support learning. Further, this knowledge includes professional contexts and activities that take place in classrooms and schools which are influenced by the educational system and the greater society rather than just classroom events.

## **Methodology**

### **Research Site**

Students who participated in this research were teaching in rural primary and high schools. Generally, the schools were located along or close to tarred roads for easy access. All schools had piped water, but very few were electrified. Primary schools had from ECD to Grade 7 while high schools offered Form 1 (Grade 8) to Form 6 (A Level equivalent of Grade 13). Student teachers were accommodated at the schools except three who operated from their homes. Class sizes were between 50 and 60 pupils.



### **Research Approach**

The purpose of the study was to explore the kinds of knowledge that the student teachers gain from mentoring meetings on a year-long residential TP. As this study aimed to understand from the students' perspectives, a qualitative approach was appropriate. Qualitative perspective views reality as constructed by individuals inter-subjectively from socially and experientially developed meanings and understandings (Cohen, Morrison, & Manion, 2011). Thus, the qualitative approach would enable understanding the kinds of knowledge that student teachers acquire from the mentoring meetings.

### **Participants**

Participants for this study were selected through convenience sampling. Convenience sampling is a non-probability sampling design that allows extracting participants that meet certain practical criteria, like geographical proximity, availability, easy accessibility, or willingness to participate (Cohen, Manion & Morrison, 2011). This was the case in this study where participants were both conveniently accessible to researchers and willing to participate in the study.

All 16 students who were in two districts, teaching at schools visited by one of the authors for TP supervision and support, were requested to participate in the study through an information letter and consent form. Seven were men and nine were women, all in the third year of teacher education. Eight were teaching form one and form two, five were teaching form two and form three. Of the remaining three participants, one was teaching form one classes only, the other was teaching form two classes only and the third one was taking classes across four levels, form one to form four. Thus, as the students were attached to mentors, we would then be able to explore the domains of knowledge that the student teachers gained from mentoring meetings.

### **Data Generation**

Data were generated through questionnaires which had thirteen open-ended questions. A questionnaire with open questions was preferred as it enabled students to air their views individually within a short space of time. Bringing students together for a focus group discussion was not possible as they were at different schools, and also given the timetabling and transport limitations. Further, the co-author visited the schools in a team of university lecturers who shared common transport.

The first section of the questionnaire elicited biographic data related to gender, year group, and classes taught. The second part extracted information on mentor-mentee relationships, and the nature and frequency of meetings. The last part focused on the kinds of knowledge that student teachers gained drawing on the domains of knowledge in the conceptual framework.

Data were generated during TP supervision trips carried out by the co-author of this paper. This strategy enabled the researcher to explain and clarify questions where necessary. The instrument was administered on arrival at the school site and collected at the end of the day after all the university lecturers had finished supervising and supporting their students. This enabled 100% response rate and also allowed participants adequate time to respond without interfering with instructional time.

**Data Analysis**

Field work was conducted between August 2016 and March 2017. Drawing on the conceptual framework, the transcripts for the 16 students were coded for the types of knowledge gained (CK, GPK, PCK, Curriculum knowledge, Context knowledge, and Knowledge of Learners and their Characteristics) through mentor-mentee meetings. This enabled sifting through the data with relative ease in a systematic fashion to identify and describe the learning of this group of students (Wheelock, Haney & Bebell, 2000). The first round of coding was done by the first author. Cohen, Manion and Morrison (2011) suggest involving an independent judge or a different person who authenticates identified themes of relevant meaning. At this point the coding was subjected to scrutiny by the co-author to revise, and identify errors or omissions. Involving the co-author at this point helped to establish trustworthiness. This was followed by re-examining the data and selecting quotes that represented each knowledge domain/theme, ensuring appropriate representation across participants in the two districts. The quotes captured participants’ descriptions which Singleton and Straits (1999) term “...capturing in their language and letting them speak for themselves” (p. 349). Table 1 reflects examples of the coding for the various categories of knowledge gained.

In transcribing the data, we observed that students’ responses did not suggest gaining CK, hence that domain of knowledge is not discussed in the findings.

**Coding**

Indicators of the different types of knowledge, and examples taken from transcripts are provided in Table 1.

Type of Knowledge	Indicators	Example
General Pedagogical Knowledge	Statements reflecting knowledge of general principles of instruction and strategies of teaching e.g., asking questions etc.	One thing that I never did was to ask a question and then give pupils time to think. I got this from my mentor. He said it helps students to process and come up with answers. (ST16)
Pedagogical Content Knowledge	Knowledge of how to teach a particular subject to make concepts comprehensible to students for instance using simple examples.	There are Form 4 topics that I didn’t quite know how to teach but one day he said we have to go through these topics. He suggested methods that work best. He showed me sections for group work, for explanation and pupils activity. (ST7)
Curriculum Knowledge	Knowledge of a teacher’s ‘tools for teaching’ e.g. knowledge of teaching materials to be taught based on understanding children’s learning potential, the syllabi, preparation documents including examinations.	He took me through the national syllabus explaining everything and the school syllabus which he said we will use. He also gave me the Scheme of work to follow in developing my own scheme from the school syllabus. (ST13)
Knowledge of Learners	Knowing what children of certain ages or background are like, their classroom behaviour, characteristics, or interests that	She said that three quarters of the students are Boarders so they have all the time to study after

Type of Knowledge	Indicators	Example
and their characteristics	affect their learning and interpersonal relationships. Includes knowledge of child development theories which inform practice, and context related knowledge and their learning capabilities	classes and their performance is good, but the others need more support in class. (ST15)
Knowledge of educational contexts	This is knowledge of the contexts of pupils' learning, their classrooms, schools, communities, the education system and society at large even international contexts that affect learning.	The mentor told me that the school had a well maintained reading culture, and pupils' backgrounds helped to keep the reading tradition. She said good working relations are important and that there is team work in the school and the community supports all school functions. (ST11)

**Table 1. Types of Knowledge, Indicators and examples**

## Findings

From the data, students gained GPK, PCK, curriculum knowledge; knowledge of learners and their characteristics; and knowledge of educational contexts. In presenting findings, student teachers are identified as ST5, ST6, ST7 etc.

## Relationships with Mentors

Silbert and Verbeek (2016) indicate that the kinds of knowledge gained and the success of interactions and learning, emanate from cordial mentor-mentee relations. Students generally reported good relationships with their mentors. All students except three had supportive mentors, who were described with words like helpful academically and socially, accommodating, understanding, very hard working, respectful, and friendly. For example other comments made were that: "...worked hand-in-hand, assisted in all areas of pedagogy" (ST7); "...assisted wherever I had problems" (ST15); "... guided me and gave their full support professionally, morally and socially" ST16; "... always gave me resources where I had few" (ST2); "... acted as if we were related, supervised my work, respected me and also asked me to teach them some topics" (ST4); "... relationship was intact like we were related ... formally related" (ST8) and "... relationship was brilliant, always willing to help in every aspect" (ST12).

These mentors apparently fulfilled some of the critical mentoring roles. Students' mentors are expected to play multifaceted roles: guiding, supervising, supporting, critiquing, and instructing (Larkin, 2013). The supportive roles that these mentors played seemingly positively influenced students' TP. The issue of respect raised is often driven by students' concern for "acceptance" as colleagues (Mukeredzi, 2017). Student teachers appreciate being respected, accepted, regarded as colleagues, and made to feel welcome in the school. They often yearn to be accepted as a person, a teacher, and a part of the teaching profession. Stanulis and Russell (2000) add that students feel "vulnerable" and "exposed" during placement hence it is vital that mentors are people whom they feel they can trust.

The issue of teaching mentors (ST4) relates to what Kaasila and Lauriala (2010) found, where mentors felt rejuvenated in their career through sharing content and pedagogy with mentees. This also implies equality in the mentoring relationship (Awaya et al., 2003). ST13 mentioned that joint planning created space for discussion and exchanging ideas which helped to

build co-operation and trust. In this regard, mentors may know more about classroom procedures and operations, while students may have new teaching pedagogies which can offer mentors deeper insights into their own teaching from joint planning, teaching and reflection (Mukeredzi, 2017).

Three of the students had ineffective mentors. One of them, ST3 described her mentor as hectic, unbearable and having given her hell, indicating that even the descriptor “hell” was an understatement. ST11 also lamented that “she was not available every time she was needed” and ST10 described his commerce mentor as “ignorant.” Such qualities contradict the expected mentor responsibilities where mentoring is viewed as a professional journey; the mentor guiding, nurturing, and supporting mentee growth; offering them practical knowledge and wisdom appraising them on weaknesses and strengths; and encouraging them in lesson delivery during the professional growth and development process (Awaya et al., 2003). In the absence of such supports, stressful and threatening situations often arise. As such, a good mentor-mentee relationship is indispensable. It is generally believed that mentor-mentee disagreement is a result of mentor inability to align the mentor’s mentoring style to the student’s capacity to perform instructional tasks. The next section presents data on types and frequency of meetings.

### Meetings

Of the students who attended mentor-mentee meetings, others were not clear whether they were talking about school and department meetings or mentor-mentee meetings as they did not clearly specify. The summary of meetings attended is reflected in Table 2 below.

ST	Type of meeting		Frequency of meetings
	Formal	Informal	
ST1			1 per week
ST2	✓		2 per term (4 months)
ST3		✓	When necessary even during the lesson
ST4	✓		1 per term (4 months)
ST5	✓		1 per fortnight
ST6	✓		1 per fortnight
ST7	✓		3 per term (4 months)
ST8	✓		Not specified
ST9			1 per fortnight
ST10			1 per week & when necessary
ST11		✓	Not specified
ST12	✓		Not specified
ST13	✓		1 per fortnight
ST14	✓		2 per term (4 months)
ST15	✓		1 per week
ST16	✓		1 per fortnight
Total	11	2	

**Table 2 Types and frequency of meetings**

11 of the 16 participants indicated that their meetings were formal. Formal meetings are those meetings understood as pre-planned gatherings for achieving some common goal and where the verbal interactions are recorded. Two had informal incidental meetings where no records were kept and were held anywhere, anytime. Five held meetings over two weeks, and

three, once a week. Two reported two meetings per term while three did not give details of the frequency of their meetings. The kinds of knowledge that student teachers gained through these meetings are discussed below.

### Types of Knowledge Gained

From Table 3, GPK and context knowledge were gained by all students. Twelve gained knowledge of students and their characteristics, and nine and seven respectively gained knowledge of the curriculum and PCK.

	C K	G PK	P CK	Curricul um	Learners	Cont ext
1		✓	✓		✓	✓
2		✓		✓		✓
3		✓	✓		✓	✓
4		✓	✓		✓	✓
5		✓		✓	✓	✓
6		✓		✓	✓	✓
7	✓	✓		✓	✓	✓
8		✓			✓	✓
9		✓	✓	✓	✓	✓
10		✓			✓	✓
11	✓	✓				✓
12		✓				✓
13		✓		✓		✓
14	✓	✓	✓	✓	✓	✓
15		✓	✓	✓	✓	✓
16		✓	✓	✓	✓	✓
To tal	3	16	7	9	12	16

**Table 3: Number of student-teachers who reflected types of knowledge gained in mentor-mentee meetings**

### General Pedagogic Knowledge

With regard to GPK, this domain of knowledge represents aspects of pedagogy that apply to teachers regardless of their specialized content knowledge. This is the kind of knowledge that enables teachers to choose and apply appropriate teaching approaches and strategies, manage learning and control students drawing on principles of child development (Shulman, 1987). All 16 students indicated having gained GPK in mentor-mentee meetings. Descriptions that they offered suggested that mentoring meetings exposed them to various aspects of pedagogy some that they had not been aware of. Some GPK aspects learnt related to scheming, preparation, use

of media, lesson pacing, remediation, demonstration, group work and lesson introduction. These are exemplified by these comments:

*I learnt to use media and pace a lesson, teaching of theory and practical lessons, and closely supervising coursework for pupils to finish garments for final submissions. (ST9)*

*We shared all information on methods even remediation and extension work and how to remedy pupils with difficulties. I also learnt demonstration. (ST8)*

*He taught me how to scheme, prepare pupils for exams, give weekly tests, and how to motivate them. Also things like how to associate with students. (ST5)*

ST1, a student teacher in a school for disabled children also remarked: "... methods of teaching students with low vision, putting them in front, taking their speed."

ST7 commented regarding group work: "... how to scheme, that every lesson should have group work to encourage participation and that methods should be varied." This was taken up by ST13 who said: "I learnt teaching group work, prepare and use media, and how to introduce a lesson. He said after asking a question, give them time to think. I didn't know that." These comments relate to the 'how to' knowledge.

Other students mentioned GPK related to class management and control. As classroom management and student discipline primarily deal with creating an atmosphere which optimizes teaching/learning and student teacher learning, participants seemed to consider it integral to their professional learning. Specifically, these pre-service teachers needed to nurture appropriate student behaviour through teaching strategies. The comments below represent some sentiments regarding classroom management. ST11 commented that: "He talked about class management. I didn't know small things like ground rules, managing a class, how you see when they don't understand. ... disciplining them; everything..."

*ST7 highlighted the use of names in managing student discipline:*

*My mentor said you have to know their names, if you call them by name they will keep quiet. I learnt that in large classes you can discipline and teach effectively if you have good classroom management techniques.*

*ST9 quoted his mentor saying:*

*He said the best way to win students is to establish control. He said you should do it when you meet your class for the first time, but always be friendly because you don't want them to be afraid but to respect you. ST9*

Classroom management and control are essential for student learning and sustaining academic achievement. Often important aspects of establishing control, include creating effective discipline policy, building rapport, and determining the needs of the problem students. Such practices enhance student achievement. It is unsurprising that student teachers gained mainly the 'how to' knowledge given that TP is the most highly valued component of teacher preparation where trainees can practice the art of teaching in real classroom contexts to develop professional knowledge, skills and attributes for effective teaching in the classroom (Bloomfield, 2010; Johnston, 2010). Student teachers also gained PCK.

### **Pedagogical Content Knowledge (Pck)**

PCK is knowledge of teaching within a given subject area which enables teachers to ease student learning using clear explanations, appropriate similarities, and presenting concepts

in ways that interest and motivate them (Grossman, 2008). PCK thus, focuses on comprehension as it is about making concepts accessible to students. Only seven students made comments suggesting that they gained PCK. For example, ST9 pointed out that: “We chose methods for topics in the school syllabus and then they helped me to break big words into synonyms for students to understand.” Gaining PCK was also confirmed by ST13 who said: “He taught me interesting ways of using teaching aids in teaching abstract concepts.” ST1 elaborated by saying:

*...teaching nap fabric laying-out to children with low vision is hard but she said the demonstration lesson has to be slow steps and after that I must go to each one and help them. When I tried, it worked.*

These comments suggest discussions for achieving an amalgamation of content and pedagogy to ease learning and promote student understanding during instruction. The comments also illustrate the intrinsic relationship between GPK and CK given that PCK is the knowledge of how to teach content within a particular subject specialisation. Student teachers also reported gaining curriculum knowledge

### **Curriculum Knowledge**

Curriculum knowledge is knowledge of that which should be taught to particular pupils which requires understanding students’ learning potential, national syllabuses, school syllabuses and planning documents, year group plans and schedules (Cogill, 2008). This knowledge also encompasses knowledge of examinations or testing documents at national, regional, district or school levels. Nine of the sixteen student teachers indicated gaining curriculum knowledge during meetings and discussions on documents issued by mentors in the first meetings. ST6 commented that “... how to break the national syllabus into teachable units. The mentor told me to plan following the school syllabus.” ST13 added: “We went through assessments, explaining weekly and monthly tests and exercises that I should give which must be recorded and explained how to evaluate lessons.” ST9 was more elaborate: “In the first meeting, the mentor, gave me the national Home Economics syllabus and went through it with me. She also explained the school syllabus which was developed from the national and said I must follow that one.” Thus, the curriculum knowledge gained related to national, and school teaching documents and assessments (Cogill, 2008). The focus was on practical knowledge - curriculum knowledge aimed at guiding the teaching action (Awaya, et al., 2003). Albeit it is assumed that all student teachers received syllabi for preparation purposes, seven did not refer to this kind of knowledge. This is notwithstanding that Zimbabwean schools adopt a scientific management approach where the Ministry of Education requires teachers to develop and maintain up to date teaching documentation, mark students’ work and return promptly, drawing on national and school syllabi (Shumbayaonda & Maringe, 2000).

Other students indicated that they learnt curriculum knowledge through mentor-mentee joint lesson planning meetings. Lesson planning generally involves laying out a design, showing how the teacher intends to achieve objectives, and indicating the procedures to follow (Mukeredzi, 2017). Through these joint activities, students became aware of the content and demands of the national and school syllabi for use in their teaching. Some commented that:

*I was afraid because the mentor said we should not follow what we were taught, but then said we plan together. In our next meeting we planned together and he guided me on those things. (ST2)*

*Planning together helped me focus on content in the school syllabus and the scheme which helped me to avoid practical teaching problems. (ST3)*

*I saw what my mentor takes as important and I was able to ask whether I could try my ideas. She said let's hear them, I explained and she nodded. (ST6)*

Students raise important aspects around guidance, exchanging ideas and tapping on what mentors consider important in joint planning, including experimentation. Reeves and Robinson (2014) emphasize this kind of shifting from passive to active professional learning through trial and error. Further, student teachers are encouraged to learn and do so best when they feel free to express and choose their own direction through experimentation (Leshem, 2012). In allowing this, mentors fulfill a dual role of teacher and learning facilitator. Collaboration also provides powerful learning environments for teachers and student teachers alike as they get excellent opportunities for working and learning together. This exchange of knowledge and experiences triggers reflection on one's and another's ideas, while providing a sounding board for one another which may expand teacher knowledge and refine one's own teaching. Knowledge of learners was also gained through mentor-mentee meetings.

### **Knowledge of Learners and their Characteristics**

This domain of knowledge implies specific understanding of students' characteristics that influence instructional delivery and learning management. Twelve of the sixteen participants indicated gaining some knowledge of learners in mentor-mentee meetings and conversations. For example, ST16 learnt that three-quarters of students were boarders so their performance was high as most of their time was spent on school work. ST13 also noted that the school was strict, so pupils were punctual for assembly, classes, and handing in books and that no child loitered outside during class time. The issue of discipline was also picked up by ST10 who learnt that students attained good results because of good discipline, and seriousness in school work starting from Form 1 but many came from poor families. Further, ST9 also indicated that in textiles, some students were keen, hardworking and very good but she struggled with other students as they needed different attention. This kind knowledge offered student teachers some pointers on classroom instruction.

Contrary to the above, four students (ST5, ST8, ST11, ST14) indicated a lack of discipline in their schools. It appears discipline was one of the key aspects in some of the schools. Student indiscipline may seriously hamper teaching/learning processes, and if disruptive behaviour prevails, education may not be successful. Students' misbehaviour causes poor learning performance and such students tend to be absent frequently from school (Marais & Meier, 2010). Further, indiscipline often forms a disproportionate and intractable part of every teacher's experience of teaching. With regards to diversity (ST9) current and projected demographic trends prompt many teachers to be aware of and sensitive to diverse students' learning needs (Ruggs & Hebl, 2012). Such awareness is crucial for teaching effectiveness as teachers should understand that pupils in any classroom are and will always be different from one another in various ways. Participants also reported gaining knowledge of educational contexts.



### **Knowledge of Educational Contexts**

All sixteen participants reported gaining some knowledge of school contexts. This domain of knowledge includes the nature of surrounding communities, workings of groups or classrooms, and governance and financing of schools (Cogill, 2008) which impacts on teachers work and pupils' learning. ST16 talked about community support in school activities, and meetings regardless of their poverty while ST13 talked about a friendly atmosphere in the school where teachers and the headmaster welcomed and treat them cordially. As well, ST7 also learnt about an open climate in the school where teachers supported each other in professional, social and personal matters. Their comments relate to suggestions by Cogill (2008) that knowledge of context implies an understanding of, *inter alia*:

- school cultures;
- communities and the catchment area from where pupils come;
- type and size of the school/classes;
- teacher/community support;
- in-school relationships, and expectations; and
- attitudes of instructional leaders.

Like knowledge of learners, context knowledge also includes workings of groups, classrooms and school governance. The student teachers' comments also suggest that collegial relations in the school extended beyond professional to social matters like parties and funerals. On the contrary however, ST3, ST9, ST10 and ST11, highlighted that surrounding communities were not supportive of school activities as very few parents showed up for meetings whenever they were called. This supports observations by Maphosa, Shumba and Shumba (2007) where some contexts portrayed barriers between communities and schools, and institutions operating in isolation of their communities as not many parents were interested in school activities.

### **Discussion of Findings**

The study explored the knowledge that student teachers gain from mentor-mentee meetings. Findings indicate that students gained GPK, PCK, curriculum knowledge, knowledge of learners, and knowledge of educational contexts. Findings further show that students (13) had good relationships with their mentors and the meetings were formal (11) and frequent, held weekly, fortnightly or monthly. A major prerequisite for student teacher interaction and learning during practicum is their relationship with the mentor teacher as this forms the basis of effective professional learning during practicum (Ambrosetti & Dekkers, 2010). Marais and Meier (2004) state that mentors have a considerable influence on the professional development of students' orientation, disposition, conceptions and classroom practice. Further, students value a supportive, interactive mentoring environment, during this period of learning to teach.

With regard to GPK, all 16 participants indicated gaining this domain of knowledge. GPK are those aspects of teacher pedagogy transcending their specialized subject matter knowledge vital for effective teaching and classroom management. The knowledge is essential for lesson planning as it guides the teacher's didactic choices necessary for effective curriculum delivery. It is unsurprising that all participants testified gaining GPK as practicum is a time honoured period where student teachers are expected to acquire the 'how to' knowledge – practical and

professional knowledge under the guidance of mentors (Bloomfield, 2010; Grisham, Ferguson, & Brink, 2004; Johnston, 2010). Classroom practice processes which form part of GPK include:

- maximizing classroom activities and instructional time;
- directing and pacing learning;
- supporting and fostering individual student progress drawing on cognitive and motivational learning processes;
- commanding various classroom strategies and when/how to use them;
- understanding forms/purposes of assessment and how different frames (social, individual, criterion-based) impact students' learning;
- structuring objectives, lesson planning processes and evaluation;
- managing/handling classroom discipline, handling student diversity and characteristics;
- use and value of prior knowledge; and
- student motivation (Bloomfield, 2010; Cogill, 2008; Johnston, 2010).

However, three students did not benefit much due to ineffective mentoring. We could not establish precisely why effective mentoring did not occur. Many issues could have been at play and it must be acknowledged that many factors might have attributed to this situation. For instance, students may be subjected to ineffective mentoring if mentors themselves experienced problematic mentoring given that much of what teachers do or do not do responds to their early experiences (Allender & Allender, 2006; Mukeredzi & Mandrona, 2013). Another problem may emanate from the fact that often it becomes difficult for Higher Education institutions external to schools, to influence internal practices, cultures and functioning. This points to the highly complex nature of school-institution relationships with regard to student TP mentoring. Further, schools often report that higher education institutions do not adequately prepare them for student TP mentoring (du Plessis et al, 2011) which limits the organizers' ability to obtain a comprehensive picture of the needs of particular school sites. Notwithstanding, ineffective mentoring in this study, occurred despite on-going school-university partnerships, and pre-TP mentor training workshops conducted by the university. All the same, one-day mentor training workshops have been criticized for ineffectiveness (Mukeredzi & Mandrona, 2013). Again, ineffective mentoring has been reported in national and international contexts (Aderibigbe, 2013; Kiggundu & Nayimuli, 2009; Larkin, 2013; Maphosa, Shumba & Shumba, 2007; Mukeredzi, 2017). This is notwithstanding that mentoring is viewed by pre-service and in-service teachers, and teacher educators as vital for professional socialization of student teachers so that they become proficient in pedagogical and management skills for effective classroom practice (Aderibigbe, 2013; du Plessis, et al., 2010; Leshem, 2012).

Seven students indicated gaining PCK. Discussions on syllabus content and appropriate strategies exposed students to this kind of knowledge. Broadly PCK is an amalgamation of subject matter and pedagogy into an understanding of how concepts may be modified to suit students' diverse abilities during instruction. Teachers draw on this knowledge to break down concepts and promote student comprehension (Shulman, 1987). Hence, it is a category which most likely distinguishes conceptual understanding of a subject specialist, from that of a general pedagogue. PCK is also about recognizing that which often makes learning of certain concepts easy or complex, the understandings or misunderstandings that students of diverse ages and backgrounds bring to the learning context of frequently taught topics. It is this knowledge that forms a bridge between knowledge of content and the practice of teaching to ensure that content discussions remain relevant to teaching, while discussions of pedagogy retain attention to content (Charalambous, 2016). All this portrays PCK as the teachers' unique province - a content-based

form of professional knowledge which enables them to organize and present lessons under real time classroom constraints, while promoting students' in-depth and integrated understanding (Bertram, 2011). It stands to reason that in order to distinguish and value the development of their own PCK, students should possess a deep conceptual understanding of their particular CK. The conceptual understanding, combined with expertise in the development, use, and adaptation of teaching strategies for particular classes is purposefully linked to creating the amalgam of knowledge of content and pedagogy (Shulman, 1987). Participants' responses did not clearly show that they gained CK from mentoring meetings. However, given that PCK is the special amalgam of content and pedagogy, this may imply that the students had adequate CK from university modules, to be able to acquire PCK.

Nine participants indicated gaining curriculum knowledge related to their subjects' national and school syllabi, and teaching documents including both horizontal and vertical subject matter (Grossman, 1990). Horizontal/lateral curriculum is generally knowledge of content and corresponding materials, while vertical curriculum relates to how topics are developed and progressed across given programmes (Mukeredzi & Sibanda, 2016). This also includes understanding what pupils have studied previously, and what they are likely to study in future. This knowledge makes a useful tool for teachers, as it determines their didactic decisions. Teachers should therefore, be familiar with the curriculum, set textbooks, national and school syllabi, including assessment rules and regulations.

Twelve participants indicated gaining knowledge of students and their characteristics. They reported gaining knowledge around pupils' learning behaviours, their discipline, interests and motivations, backgrounds, diversity, and learning abilities and difficulties. Liakopoulou (2011) indicates that this kind of knowledge encompasses students' empirical/social knowledge and cognitive knowledge. Empirical knowledge includes biological aspects, social characteristics, classroom/school behaviours, interests/concerns, contextual influences, interpersonal relations/interactions, teacher-student relationships, and group dynamics. Cognitive knowledge on the other hand refers to learning abilities, psychological and cognitive development, learning motivation, adjustment issues, and learning difficulties. In-depth understanding of pupils enables the teacher to: create a psychologically effective, and safe learning environment for all students; determine each student's readiness for learning certain concepts; identify multiple curriculum entry points to enhance student active engagement and success; and structure learning to cater for diverse student capabilities (Ruggs & Hebl, 2012). Given the inherent diversity in every classroom, an awareness of learning diversity requires exploring students' differences in a safe, positive, and nurturing environment, understanding each individual student beyond simple tolerance but accepting and applauding the aspects of their diversity, this facilitates differentiated instruction. One student testified that knowledge of the students' backgrounds and capabilities helped him to choose activities, control discipline and manage the learning (ST1).

Students' comments also suggested that they all gained knowledge of educational contexts related to the nature of schools, teacher relationships, parents, and the community. Understanding classroom/school context is essential for creating learning environments in which every student can thrive. With this knowledge, teachers can assess their contexts and act appropriately given that their professional actions are defined by surrounding circumstances. In other words, there are rarely any predetermined dispositions that suit all contexts. Again, certain outlooks on reality, often exist which teachers can use to interpret their context, and there are varied techniques and strategies available for use depending on their situation. This knowledge is also vital for teacher

understanding of frameworks that influence children's learning styles, so as to structure learning that deepens their understanding of children's learning broadly, but specifically how children learn.

## Conclusion

Knowing what to teach, how to teach it, and the appropriate strategies to use with particular topics, the specific kinds of pupils and their precise settings, often amalgamate into the knowledge and skills that define what students are expected to gain during teacher education including residential practicum. This study explored the kinds of knowledge that student teachers gain from mentor-mentee meetings during TP. The research established that students had good relationships with their mentors and generally attended formal mentor-mentee meetings weekly, fortnightly or monthly. From these meetings, students gained GPK (16), PCK (7), curriculum knowledge (9), knowledge of learners (12), and of educational contexts (16). Three students were ineffectively mentored, consequently may have accrued limited gains from practicum experiences. This study recommends comprehensive prolonged on-going mentor-training workshops. Such workshops may rebuild/strengthen a sense of trust among stakeholders and ensure a shared vision of students TP mentoring. This may also provide a platform for developing strategies that offer mentors greater exposure to mentoring practices and school-based supports to better equip them not only for student teacher mentoring but also for their own professional growth and rejuvenation of their classroom practice. That said, this is a small research that explored only 16 students. Given the centrality of student TP to teacher development and of mentoring in school-based teacher education, more comprehensive research is required. Such work could address among others: questions around schools' and mentors' understandings of their responsibility in student TP; and mentors and schools' experiences and conceptions of student TP mentoring. Perspectives from such studies may be vital for re-conceptualizing teacher development and pre-service teacher TP.

## References

- Aderbibigbe, S.A. (2013). Opportunities of the collaborate mentoring relationships between teachers and student teachers and university tutors. *Management in Education*, 2, 70-74. <https://doi.org/10.1177/0892020612471698>
- Allender, J., & Allender, D. (2006). How did our early education determine who we are as teachers? In L.M Heston & D L Tidwell (eds). *Collaboration and community. Pushing boundaries through self-study of Teacher Education Practices* (pp14-17). Cedar Falls University of Northern Iowa.
- Ambrosetti, A., & Dekkers, J. (2010). The interconnectedness of the roles of mentors and mentees in pre-service Teacher Education mentoring relationships. *Australian Journal of Teacher Education*, 35, 42-55. <https://doi.org/10.14221/ajte.2010v35n6.3>
- Awaya, A., McEwan, H., Heyler, D., Linsky, S., Lum, D., & Wakukawa, P. (2003). Mentoring as a journey. *Teaching and Teacher Education*, 19(2), 45-56. [https://doi.org/10.1016/s0742-051x\(02\)00093-8](https://doi.org/10.1016/s0742-051x(02)00093-8)

- Bertram, C. (2011). What does research say about teacher learning and teacher knowledge? Implications for professional development in South Africa. *Journal of Education*, 5(2), 4-26.
- Bloomfield, D. (2010). Emotions and 'getting by': a pre-service teacher navigating professional experience. *Asia-Pacific Journal of Teacher Education*, 38(3), 221-234. <https://doi.org/10.1080/1359866x.2010.494005>
- Caires, S., & Almeida, L. (2005). Teaching practice in Initial Teacher Education: Its impact on student teachers' professional skills and development. *Journal of Education for Teaching*, 103(3), 111 - 120. <https://doi.org/10.1080/02607470500127236>
- Charalambous, C.Y. (2016). Investigating the Knowledge Needed for Teaching Mathematics: An Exploratory Validation Study Focusing on Teaching Practices. *Journal of Teacher Education*, 67(3), 220–237. <https://doi.org/10.1177/0022487116634168>
- Cavanagh, M.S., & Garvey, T. (2012). A professional experience learning community for pre-service secondary mathematics teachers. *Australian Journal of Teacher Education*, 37(12), 57- 74. <https://doi.org/10.14221/ajte.2012v37n12.4>
- Cogill, J. (2008). *Primary teachers' interactive whiteboard practice across one year: Changes in pedagogy and influencing factors*. EdD Thesis, King's College University of London.
- Cohen, L., Manion, L., & Morrison, K. (2011). *Research Methods in Education*. 7<sup>th</sup> edition. London: Routledge.
- Darling-Hammond, L. (2006). Constructing 21st-century teacher education. *Journal of Teacher Education*, 57, 300-314. <https://doi.org/10.1177/0022487105285962>
- du Plessis, E.C., Marais, P., Van Schalkwyk, A., & Weeks, F. (2010). Adapt or die: The views of UNISA student teachers on teaching practice at schools. *Africa Education Review*, 7(2), 323-341. <https://doi.org/10.1080/18146627.2010.515401>
- Fafunwa, A.B. (2001). Crises and challenges on higher education: An overview. In A.U. Akubue & D. Enyi (eds.). *Crises and challenges in higher education in developing countries: A book of readings* (pp 1-15). Ibadan, Nigeria: Wisdom Publisher Ltd.
- Gaddis, S.M. (2012). What's in a Relationship? An Examination of Social Capital, Race and Class in Mentoring Relationships. *Social Forces*, 90(4), 1237-1269. <https://doi.org/10.1093/sf/sos003>
- Gershenfeld, S. (2014). A Review of Undergraduate Mentoring Programs. *Review of Educational Research*, 84(3):365–391. <https://doi.org/10.3102/0034654313520512>
- Grisham, D.L., Ferguson, J. L., & Brink, B. (2004). Mentoring the mentors: Student teachers' contributions to the middle school classroom. *Mentoring and Tutoring: Partnership in Learning*, 12(3), 307–319. <https://doi.org/10.1080/030910042000275918>
- Grossman, P.L. (1990). *The Making of a Teacher: Teacher Knowledge and Teacher Education*. NY: Teachers' College Press.
- Heeralal, P.J.H. (2014). Pre-service Teacher's Reflections of Lessons Taught during Practice Teaching. *Kamla-Raj International Journal Educational Sciences*, 7(3), 789-793. <https://doi.org/10.1080/09751122.2014.11890242>
- Heikkinen, H.L.T., Wilkinson, J., Aspfors, J., & Bristol, L. (2018). Understanding mentoring of new teachers: Communicative and strategic practices in Australia and Finland. *Teaching and Teacher Education*, 71, 1-11. <https://doi.org/10.1016/j.tate.2017.11.025>
- Hudson, P. (2013). Mentoring as professional development: 'growth for both' mentor and mentee. *Journal Professional Development in Education*, 39(5), 771–783. <https://doi.org/10.1080/19415257.2012.749415>

- Hudson, P. (2016). Forming the Mentor-Mentee Relationship. *Mentoring & Tutoring: Partnership in Learning*, 24(1), 30-43. <https://doi.org/10.1080/13611267.2016.1163637>
- Johnston, D.H. (2010). "Losing the joy": student teachers' experiences of problematic relations with host teachers on school placement. *Teacher Development: An international Journal of Teachers' Professional Development*, 14: 307-320. <https://doi.org/10.1080/13664530.2010.504012>
- Kaasila, R., & Lauriala, A. (2010). Towards a collaborate interactionist model of teachers change. *Teachers and Teaching*. 26, 854-872. <https://doi.org/10.1016/j.tate.2009.10.023>
- Kettle, B., & Sellars, B. (1996). The development of student teachers' practical theory of teaching. *Teaching and Teacher Education*, 12(1), 1-24. [https://doi.org/10.1016/0742-051x\(95\)00016-d](https://doi.org/10.1016/0742-051x(95)00016-d)
- Kiggundu, E. & Nayimuli, S. (2009). Teaching practice. A make or break phase for student teachers. *South African Journal of Education*, 29, 345-358. <https://doi.org/10.15700/saje.v29n3a129>
- Larkin, D.D. (2013). *Deep knowledge, learning to teach science for understanding and equity*. New York, N.Y. Teachers College Press.
- Leshem, D.B. (2012). The many faces of mentor-mentee relation shops in a Pre-Service Teacher Education programme. *Creative Education*, 3, 413-421. <https://doi.org/10.4236/ce.2012.34065>
- Liakopoulou, M. (2011). Professional Competence of Teachers: Which qualities, attitudes, skills and knowledge contribute to a teacher's effectiveness? *International Journal of Humanities and Social Science*. 1(21), 66-78.
- Malderez, A. (2009). *Mentoring. The Cambridge guide to second language*. Teacher Education, Cambridge: CUP.
- Maggioli, G.D. (2014). Mentor-mentee interactions in the practicum: Whose/Who's learning? *Argentinian Journal of Applied Linguistics*, 2(2), 23-41.
- Manwa, L., Mukeredzi, T.G., & Manwa, L. (2016). Rural school teaching in Zimbabwe: Experiences of beginning primary school teachers. *Australian and International Journal of Rural Education*, 26(2), 63-76.
- Maphosa, C., Shumba, J., & Shumba, A. (2007). Mentorship for students on teaching practice in Zimbabwe: Are student teachers getting a raw deal? *South African Journal of Higher Education*, 21(2), 296-307. <https://doi.org/10.4314/sajhe.v21i2.25637>
- Mukeredzi, T.G. & Mandrona, A. R. (2013). The journey to becoming professionals: Student teachers' experiences of teaching practice in a rural South African context. *International Journal of educational research*, 62, 141-151. <https://doi.org/10.1016/j.ijer.2013.07.010>
- Mukeredzi, T.G., & Sibanda D. (2016). Part-time PGCE teacher-students: What do they bring to and expect from a formal programme? *Australian Journal of Teacher education*, 41(9), 81-99. <https://doi.org/10.14221/ajte.2016v41n9.5>
- Mukeredzi, T.G. (2017). Mentoring in a cohort model of practicum: Mentors and Pre-service teachers' experiences in a Rural South African School. *SAGE Open*, 1-15. <https://doi.org/10.1177/2158244017709863>
- Rahman, F.A., Scaife, J., Yahya, N.A., & Jalil, H.A. (2010). Knowledge of diverse learners: Implications for the practice of teaching. *International Journal of Instruction*, 3(2), 83-96.

- Reeves, C., & Robinson, M. (2014). Assumptions underpinning the conceptualisation of professional learning in teacher education. *South African Journal of Higher Education*, 28(1), 236–253. <https://doi.org/10.20853/28-1-320>
- Ruggs, E., & Hebl, M. (2012). Literature overview: Diversity, inclusion, and cultural awareness for classroom and outreach education. *Apply research to practice (ARP) resources*. Retrieved from [https://www. Engr. psu.edu/awe/ARP Abstracts/ /Diversity Inclusion/ARP Diversity Inclusion Cultural Awareness](https://www.Engr.psu.edu/awe/ARP%20Abstracts/ Diversity%20Inclusion/ARP%20Diversity%20Inclusion%20Cultural%20Awareness). <https://doi.org/10.4324/9781315437453-3>
- Silbert, P., & Verbeek, C. (2016). Partnerships in action: Establishing a model of collaborative support to student and mentor teachers through a university-school partnership. *Journal of Education*, 64, 111-135.
- Singleton, R.A., & Straits, B.C. (1999). *Approaches to social research* (3<sup>rd</sup> eds.) Oxford U.K Oxford University Press.
- Shulman, L.S. (1987). Knowledge and teaching: Foundations of the new reform. *Harvard Educational Review*, 57(1), 1-23. <https://doi.org/10.17763/haer.57.1.j463w79r56455411>
- Shumbayaonda, W., & Maringe, F. (2000). *A guide to School Experiences*. Harare: Zimbabwe Open University.
- Stanulis, R.N., & Russel, D. (2000). Jumping in trust and communication in mentoring student teachers. *Teaching and Teacher Education*, 16, 65-80. [https://doi.org/10.1016/s0742-051x\(99\)00041-4](https://doi.org/10.1016/s0742-051x(99)00041-4)
- Strong, M., & Baron, W. (2004). An analysis of mentoring conversations with beginning teachers: Suggestions and responses. *Teaching and Teacher Education*, 20, 47–57. <https://doi.org/10.1016/j.tate.2003.09.005>
- Wheelock, A., Haney, W., & Bebell, D. (2000). *What can student drawings tell us about high-stakes testing in Massachusetts?* T C Record.org Report.
- Witterholt, M., Goedhart, M., & Suhre, C. (2016). The impact of peer collaboration on teachers' practical knowledge. *European Journal of Teacher Education*, 39(1), 126–143. <https://doi.org/10.1080/02619768.2015.1109624>
- Zhang, Q. (2014). Assessing the effects of instructor enthusiasm on classroom engagement, learning goal orientation, and academic self-efficacy. *Communication Teacher*, 28(1), 44-56. <https://doi.org/10.1080/17404622.2013.839047>