

# The Reflections of PGCE Pre-Service Teachers on 'Unsuccessful Lessons' during Teaching Practice: Insights from a Rural University



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## ABSTRACT

Requiring pre-service teachers to reflect on their teaching experiences is essential for identifying gaps in their professional development. This study was conducted to explore how pre-service teachers at a rural university in South Africa reflected on the factors contributing to less successful executed lessons. Written reflections, submitted as part of a formal assessment, were used to identify these contributing factors. Twelve students volunteered to participate in the study. A thematic analysis of the written reflections revealed several gaps in the participants' experiences. The factors identified as contributing to their challenges were primarily personal, curricular, and pedagogical in nature. These findings suggest that mentor teachers may be fulfilling their mentoring duties in a more superficial manner, focusing on meeting basic requirements rather than actively helping pre-service teachers develop the necessary competencies to succeed in the classroom. This underscores the need for a more intentional and supportive approach to mentoring, where mentor teachers engage more deeply in fostering pre-service teachers' growth and development.

*Keywords: Reflection, mentoring, PGCE, pre-service teachers, professional learning, teaching practice*

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## INTRODUCTION

The Postgraduate Certificate in Education (PGCE) is an intensive one-year programme designed for graduates from other fields who wish to enter the teaching profession. Typically, students spend the first semester attending lectures and the second semester completing their teaching practice in schools of their choice. Many of our students choose to complete their teaching practices in schools in rural areas. Within the South African context, limited research has examined PGCE pre-service students' experiences during teaching practice, particularly from historically disadvantaged institutions (HDIs). Existing studies have largely focused on mentor teachers' perceptions of PGCE pre-service teachers (PSTs) and their learning experiences.<sup>1</sup> Findings highlight several challenges, including PGCE students' limited pedagogical content knowledge (PCK), concerns raised by school principals about their

<sup>1</sup> Rachel Gugu Mkhlasibe, Dumisani Wilfred Mncube, and Oluwatoyin Ayodele Ajani, "The Nexus between Teaching Practice and PGCE Student-Teachers: The Perceptions of Subject Mentors on Pre-Teachers' Readiness for Teaching Career," *Universal Journal of Educational Research* 9, no. 9 (2021): 1617-27; Oyinlola Adebola, "Pre-Service Teachers Experiences during Teaching Practice in South Africa: Challenges and Solutions," *Journal of Education, Teaching and Learning* 7, no. 1 (2022): 66-72; Thabisile Nkambule and Tabitha Grace Mukeredzi, "Pre-Service Teachers' Professional Learning Experiences during Rural Teaching Practice in Acornhoek, Mpumalanga Province," *South African Journal of Education* 37, no. 3 (2017): 1-9.

readiness, and inadequate support from mentor teachers. However, little attention has been given to PGCE PSTs' reflective competencies, an essential skill for professional learning and growth. This study, therefore, seeks to explore the reflective abilities of PGCE PSTs during teaching practice, with the aim of identifying ways to strengthen and enhance this critical capacity. This qualitative study required PSTs to reflect on a lesson which they considered to have been unsuccessful. We were seeking a reflection grounded in the nexus between theory learnt in their methodology course and practice. In the preceding sections, we outlined the literature review, theoretical framework, methodology, findings, and discussion, all of which culminate in the conclusion.

## **LITERATURE REVIEW**

### **Centering professional learning in teaching practice**

Teaching practice is a critical component of initial teacher education (ITE). While ITE equips pre-service teachers (PSTs) with theoretical knowledge about teaching and learning (knowledge for practice), teaching practice provides the essential opportunity for these aspiring teachers to apply that theory in real-world classroom settings (knowledge from practice). These are authentic contexts that allow students to develop practical, contextual, and situational knowledge to become efficient professionals.<sup>2</sup> One will not graduate without undergoing teaching practice, which normally lasts a period of twelve to fourteen weeks for postgraduate certificate in education students in their area of study. Completing teaching practice ensures that the prospective new teacher graduates are well-positioned to meet expectations for registration as beginner teachers. During teaching practice, pre-service teachers are given the initial orientation to practice from which to learn and develop the ethos and ethics of the profession. They would be engaged in all professional activities that are done by qualified teachers as protégés that lead to the development of professional knowledge, reflective skills, and practical capabilities for teaching. Practical learning opportunities are considered vital for the development of professional knowledge in teacher education.<sup>3</sup> Lawson refers to this as professional socialisation.<sup>4</sup>

The teaching practice process is ideally structured into three phases. During the observation phase, PSTs observe their mentor teachers whilst they deliver lessons. During this phase, they focus on developing an understanding of teaching strategies, assessment practices, classroom management techniques, and how to engage learners effectively. PSTs should also reflect on the rationale behind instructional decisions and note methods they might adopt or adapt to craft their own teaching. In the co-teaching and guided teaching phase, PSTs gradually take on teaching responsibilities under the watchful eye of their mentor teachers. This could involve co-teaching or leading specific segments of a lesson. During this period, PSTs are to receive constructive and functional feedback and engage in pedagogical conversations about their strengths and areas for growth, enabling them to fine-tune their teaching skills in a supportive environment. In the independent teaching phase, PSTs assume full responsibility for the class. In this phase, they are to plan and deliver lessons independently while still receiving further constructive feedback that connects the PST's practice to theory and should facilitate reflection and critical thinking.<sup>5</sup> Garza is of the opinion that deliberately written feedback that offers instructional guidance and that is recorded for future reference is more useful for PSTs.<sup>6</sup> This phase helps PSTs build confidence and autonomy, preparing them for real-world teaching scenarios. The entirety of PST's teaching practice experiences has centred around these three phases. Our reference to PSTs' experiences is intended to convey the ways in which events, situations, and phenomena are

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<sup>2</sup> DHET., "National Policy on Community Colleges.," 2015.

<sup>3</sup> Kairit Tammets, Kai Pata, and Eve Eisenschmidt, "Novice Teachers' Learning and Knowledge Building during the Induction Programme," *European Journal of Teacher Education* 42, no. 1 (2019): 36–51.

<sup>4</sup> Hal A Lawson, "Reproductive, Reformist, and Transformative Teacher Socialization," in *Teacher Socialization in Physical Education* (Routledge, 2016), 259–77.

<sup>5</sup> Martyn Denscombe, *EBOOK: The Good Research Guide: For Small-Scale Social Research Projects* (McGraw-Hill Education (UK), 2017).

<sup>6</sup> Eduardo A Garza-Villarreal et al., "Music Reduces Pain and Increases Functional Mobility in Fibromyalgia," *Frontiers in Psychology* 5 (2014): 90.

perceived by individuals; that is, we seek to present the thoughts, feelings, and emotions of the people as they participate in a particular type of activity.<sup>7</sup>

Studies that have focused on PSTs' experiences of teaching practice have looked at the entirety of the teaching experience.<sup>8</sup> Whilst findings that have a bearing on the experience of PSTs have been identified, we argue that a macro perspective tends to mask the nuanced experiences of pre-service teachers (PSTs) by overlooking specific aspects of their teaching practice that may significantly influence their professional development. It is in little things that learning that makes the greatest difference takes place. The macro perspective risks homogenizing the diverse realities of PSTs and may obscure critical moments of growth, struggle, or innovation that occur during the three phases of teaching practice. This study argues that focusing on each phase of their teaching practice allows for a fine-grained analysis of events, actions, and interactions that promotes a deeper understanding of the specific experiences and challenges faced by PSTs, offering targeted insights that can inform tailored support mechanisms, more effective mentoring, and the development of contextually relevant teacher education programmes.

This study focuses on the phase when the PST has been given full control of the class. The classroom environment provides PSTs with the opportunity to learn (OTL) in order to develop practice-oriented and contextual knowledge through actions, activities, and interactions, which helps them construct their personal knowledge of and for teaching. Critical incidents have been identified as opportunities for PST learning in multiple ways.<sup>9</sup> The term *critical incident* lacks a uniform definition, with varying interpretations in the literature. Toon et al., describe it as a noteworthy, vivid, and memorable everyday event. Schön defines it as a problematic situation that triggers reflection, while Sikes et al. view it as a charged event with significant consequences, often leading to professional and personal change.<sup>10</sup> Critical incidents stimulate reflection. Critical incidents embody a person's beliefs, perceptions, and contextual aspects. In this study, an unsuccessful lesson will be a critical incident since it is an event with significant consequences.

An unsuccessful lesson is an OTL, as it gives the PST the opportunity to re-enact their past lessons and think about all the actions that had a bearing on how they interacted with learners and content. It has been suggested that PSTs often find it difficult to connect theoretical insights to teachers' classroom practices.<sup>11</sup> By examining their actions in practice, PSTs are required to draw together insights from different knowledge domains of teacher education, such as disciplinary knowledge, pedagogical knowledge, foundational knowledge, and their understanding of the school context. Together, these knowledge dimensions lay the foundation on which PSTs can make decisions and exercise discretion that underpin their classroom practices. Experience has shown that PSTs rarely make these connections, and hence, it is crucial to provide such support. By examining the cause of a lesson's failure, PSTs can have an opportunity to uncover the limitations of their pedagogical reasoning and underlying assumptions, thereby refining their teaching approach to foster learner engagement and understanding. PSTs should develop the capacity to reason soundly about their teaching as well as to

<sup>7</sup> Max Van Manen, *Phenomenology of Practice: Meaning-Giving Methods in Phenomenological Research and Writing* (Routledge, 2023).

<sup>8</sup> Omayya Al-Hassan, Ali Al-Barakat, and Yazid Al-Hassan, "Pre-Service Teachers' Reflections during Field Experience," *Journal of Education for Teaching* 38, no. 4 (2012): 419–34; Lindiwe Jiyane and Sarah J Gravett, "The Practice Learning Experiences of Student Teachers at a Rural Campus of a South African University," *South African Journal of Childhood Education* 9, no. 1 (2019): 1–9; Tabitha Grace Mukeredzi, "Teacher Preparation for Rurality: A Cohort Model of Teaching Practice in a Rural South African School," in *Rural Education across the World: Models of Innovative Practice and Impact* (Springer, 2021), 65–87; Nkambule and Mukeredzi, "Pre-Service Teachers' Professional Learning Experiences during Rural Teaching Practice in Acornhoek, Mpumalanga Province"; Lufi Kartika Sari et al., "Pre-Service Teachers' Teaching Challenges and the Transformative Learning Opportunities during Teaching Practice in Indonesian Remote Areas," *European Journal of Teacher Education* 47, no. 3 (2024): 581–98.

<sup>9</sup> Auli Toom et al., "Teacher Candidate Learning of Action-Oriented Knowledge from Triggering Incidents in Teaching Practice," *Teachers and Teaching* 25, no. 5 (2019): 536–52.

<sup>10</sup> Toom et al., "Teacher Candidate Learning of Action-Oriented Knowledge from Triggering Incidents in Teaching Practice"; Elliot Aronson et al., *The Jigsaw Classroom. Beverly Hills* (California: Sage Publications, 1978).

<sup>11</sup> Carol Bertram and Lee Rusznyak, "Navigating Tensions in Designing a Curriculum That Prepares Preservice Teachers for School-Based Learning," *Education as Change* 28, no. 1 (2024): 1–23.

perform skilfully.<sup>12</sup> This is reflected in the South African Council of Educators (SACE) professional teaching standards that ‘Teachers make thoughtful choices about their teaching that lead to learning goals for all learners’.<sup>13</sup> PSTs need to understand teaching as a specialized practice.<sup>14</sup>

However, research suggests that teaching practice does not present PSTs with meaningful opportunities for professional development.<sup>15</sup> They find it difficult to connect different domains of knowledge of teacher education to practice.<sup>16</sup> The blame has been pinned on the mentoring or lack of it from teacher educators and mentor teachers.<sup>17</sup> PSTs are not provided with OTL that encourages them to articulate the reasoning behind the choices and decisions they make in the design and delivery of their own lessons.<sup>18</sup> The feedback provided to PSTs has predominantly emphasized the performance aspects of their practice, offering limited insight into the underlying reasoning that shapes their actions and decisions in the classroom.<sup>19</sup> Inherently, teaching practices become an exercise in modelling and imitation, an accumulation of practical tips on class management, or a cementing of preexisting conceptions and misconceptions.<sup>20</sup> This lack of reflective practice limits their ability to develop a deeper understanding of how their instructional decisions impact student learning and growth. As a result, PSTs are hindered from developing professional knowledge and skills to cope with various eventualities and complexities in those contexts.<sup>21</sup>

As suggested by Rusznyak and Bertram, teaching practice needs to provide PSTs to articulate their reasoning about what they do and why, so that the grounds of that reasoning can be engaged with explicitly.<sup>22</sup> By requesting PSTs to identify whether a lesson was successful or not, it becomes a learning opportunity to learn from practice why particular instructional options are deemed more appropriate than others in their development to become effective teachers. Asking students to reflect on their practice aids self-evaluation and identification of strengths and weaknesses, which promotes learning from their own errors and practice by answering what they would have done differently. According to Luft et al., when preservice teachers (PSTs) engage in OTL, they can challenge their existing beliefs, enhance their content knowledge, and improve their pedagogical content knowledge.<sup>23</sup> This improvement includes developing an understanding of how learners learn concepts, recognizing the difficulties that learners face during instruction, and expanding their knowledge of effective science teaching practices.

The challenge that higher education has is the development and preparation of quality teachers who will not just survive but thrive, especially in rural contexts. In light of the challenges in rural contexts, pedagogical practices that could collectively be described as responsive teaching have become an important emphasis of teacher education and professional development.<sup>24</sup> There is research lamenting

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<sup>12</sup> Lee Rusznyak and Carol Bertram, “Conceptualising Work-Integrated Learning to Support Pre-Service Teachers’ Pedagogic Reasoning,” *Journal of Education* (University of KwaZulu-Natal), no. 83 (2021): 34–53; Lee Shulman, “Knowledge and Teaching: Foundations of the New Reform,” *Harvard Educational Review* 57, no. 1 (1987): 1–23.

<sup>13</sup> South African Council for Educators, “Redefining Role and Functions of the South Council of Educators (SACE),” Position Paper, 2016, <http://www.sace.org.za/assets/documents/uploads/sace-61457-2019-05-20>.

<sup>14</sup> Bertram and Rusznyak, “Navigating Tensions in Designing a Curriculum That Prepares Preservice Teachers for School-Based Learning.”

<sup>15</sup> John Loughran, “Pedagogical Reasoning: The Foundation of the Professional Knowledge of Teaching,” *Teachers and Teaching* 25, no. 5 (2019): 523–35; Rusznyak and Bertram, “Conceptualising Work-Integrated Learning to Support Pre-Service Teachers’ Pedagogic Reasoning.”

<sup>16</sup> Brenda Zaragoza, “Reentry Roadblocks: Investigating the Unique Reintegration Challenges of Rural Offenders” (University of Tennessee at Chattanooga, 2024).

<sup>17</sup> Habasisa Vincent Molise, Malose Isaac Kola, and Mohammed Xolile Ntshangase, “Examining the Continuous Professional Teacher Development Programme in South Africa: A Case Study of Economics and Management Science Teachers in the Thabo-Mafutsanyane District,” *E-Journal of Humanities, Arts and Social Sciences*, January 10, 2024, 1567–80, <https://doi.org/10.38159/ejass.202341315>.

<sup>18</sup> Bertram and Rusznyak, “Navigating Tensions in Designing a Curriculum That Prepares Preservice Teachers for School-Based Learning”; Rusznyak and Bertram, “Conceptualising Work-Integrated Learning to Support Pre-Service Teachers’ Pedagogic Reasoning.”

<sup>19</sup> Rusznyak and Bertram, “Conceptualising Work-Integrated Learning to Support Pre-Service Teachers’ Pedagogic Reasoning.”

<sup>20</sup> J. Calderhead, “Learning from Introductory School Experience,” *Journal of Education for Teaching* 14, no.1(1988):75–83.

<sup>21</sup> Nkambule and Mukeredzi, “Pre-Service Teachers’ Professional Learning Experiences during Rural Teaching Practice in Acornhoek, Mpumalanga Province.”

<sup>22</sup> Rusznyak and Bertram, “Conceptualising Work-Integrated Learning to Support Pre-Service Teachers’ Pedagogic Reasoning.”

<sup>23</sup> Julie A Luft et al., “The First 5 Years of Teaching Science: The Beliefs, Knowledge, Practices, and Opportunities to Learn of Secondary Science Teachers,” *Journal of Research in Science Teaching* 59, no. 9 (2022): 1692–1725.

<sup>24</sup> Christina Krist and Soo-Yean Shim, “Which Ideas, When, and Why? An Experienced Teacher’s In-the-moment Pedagogical Reasoning about Facilitating Student Sense-making Discussions,” *Journal of Research in Science Teaching* 61, no. 2 (2024): 255–88.

the lack of teacher education in preparing teachers for rural teaching.<sup>25</sup> The majority of schools in South Africa are located in rural areas.<sup>26</sup> The majority of these rural schools are situated in three provinces: KwaZulu-Natal (KZN) (4,040), Limpopo (3,342), and the Eastern Cape (1,832). Many university pre-service teachers come from rural communities.<sup>27</sup>

### **Portfolios as a tool to enhance reflection**

At the completion of teaching practice, PSTs are required to submit a teaching portfolio for competence assessment. The teaching portfolio serves as a record of the PST's learning journey, showcasing evidence of their development in knowledge, skills, attitudes, and professional dispositions. As suggested by Beka and Kulinxha, portfolios detail stories of accomplished and/or unaccomplished work and the challenges and successes encountered during the process.<sup>28</sup> Thus, the compilation of portfolios necessitates reflective thinking and reflection on past experiences by the PST. Portfolios have been used by teacher educators as a form of assessment in higher education and for research purposes.<sup>29</sup> The assessment is based on the robustness of PSTs' ability to self-reflect on their classroom practices during teaching practice. Therefore, portfolios are supportive structures to enhance PSTs' reflection on their actions during teaching practice. Thus, they serve a dual purpose. The professional learning of PSTs requires a supportive environment that promotes higher levels of reflective thinking and self-evaluation of teaching practices.<sup>30</sup> There is an emerging trend of research on the use of portfolios to promote robust reflection.<sup>31</sup> In this study, the pre-service teachers (PSTs) were required to complete four structured activities within their teaching portfolios, each designed to foster reflective practice and deepen their development of practical/professional knowledge of teaching and learning:

**Observation Reflection:** PSTs reflected on a lesson taught by their mentor teacher. This activity was intended to encourage them to critically analyze effective teaching strategies, classroom management techniques, and learner engagement approaches observed in their mentor's practice. Furthermore, they were to reflect on the strategies to engage learners cognitively, emotionally, and socially.

**Feedback Reflection:** PSTs reflected on a lesson they taught, which was observed by their mentor teacher. This included a review of the mentor's feedback, prompting them to consider areas of strength and opportunities for improvement in their instructional delivery and classroom interactions.

**Success and Failure Reflection:** PSTs analyzed one lesson they perceived as successful and another they deemed unsuccessful. Through this dual reflection, they were to provide theory-backed reasons as to what contributed to the outcomes of each lesson, promoting an understanding of how to approach teaching as a context-dependent, multidimensional decision-making activity. PSTs' opportunities to learn should be increasingly grounded in practice. This study explored how PSTs reflected on science lessons they perceived as unsuccessful. We aim to examine the common challenges that PSTs encounter

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<sup>25</sup> Relebohile Moletsane, "Repositioning Educational Research on Rurality and Rural Education in South Africa: Beyond Deficit Paradigms," *Perspectives in Education* 30, no. 1 (2012): 1–8; Amanda Sullivan and Marina Umaschi Bers, "Dancing Robots: Integrating Art, Music, and Robotics in Singapore's Early Childhood Centers," *International Journal of Technology and Design Education* 28, no. 2 (June 23, 2018): 325–46, <https://doi.org/10.1007/s10798-017-9397-0>.

<sup>26</sup> Malik Sallam, "ChatGPT Utility in Healthcare Education, Research, and Practice: Systematic Review on the Promising Perspectives and Valid Concerns," *Healthcare* 11, no. 6 (March 19, 2023): 887, <https://doi.org/10.3390/healthcare11060887>.

<sup>27</sup> Alfred Masinire, "Recruiting and Retaining Teachers in Rural Schools in South Africa: Insights from a Rural Teaching Experience Programme," *Australian and International Journal of Rural Education* 25, no. 1 (2015): 1–13.

<sup>28</sup> Arlinda Beka and Ganimete Kulinxha, "Portfolio as a Tool for Self-Reflection and Professional Development for Pre-Service Teachers," *International Journal of Learning, Teaching and Educational Research* 20, no. 2 (2021): 22–35.

<sup>29</sup> Emma Walland and Stuart Shaw, "E-Portfolios in Teaching, Learning and Assessment: Tensions in Theory and Praxis," *Technology, Pedagogy and Education* 31, no. 3 (May 27, 2022): 363–79, <https://doi.org/10.1080/1475939X.2022.2074087>; Beka and Kulinxha, "Portfolio as a Tool for Self-Reflection and Professional Development for Pre-Service Teachers"; Koki Mandai et al., "A Cross-Era Discourse on ChatGPT's Influence in Higher Education through the Lens of John Dewey and Benjamin Bloom," *Education Sciences* 14, no. 6 (2024): 614.

<sup>30</sup> Mukeredzi, "Teacher Preparation for Rurality: A Cohort Model of Teaching Practice in a Rural South African School."

<sup>31</sup> Konstantinos Michos and Dominik Petko, "Reflection Using Mobile Portfolios during Teaching Internships: Tracing the Influence of Mentors and Peers on Teacher Self-Efficacy," *Technology, Pedagogy and Education* 33, no. 3 (May 26, 2024): 291–311, <https://doi.org/10.1080/1475939X.2024.2311798>; Peter Slepcevic-Zach and Michaela Stock, "EPortfolio as a Tool for Reflection and Self-Reflection," *Reflective Practice* 19, no. 3 (May 4, 2018): 291–307, <https://doi.org/10.1080/14623943.2018.1437399>.

in planning and delivering lessons and to understand if the reasoning behind them is not/linked to the various knowledge components of teacher education. This brings the importance of interconnectedness between different types of knowledge and practices into the foreground.<sup>32</sup>

**Teaching Philosophy Development:** PSTs consolidated their teaching experiences by crafting a personal teaching philosophy. This final activity required them to articulate their evolving beliefs, values, and approaches to teaching, synthesising insights gained throughout their reflections and teaching practice.

These activities aimed to scaffold the PSTs' ability to engage in meaningful reflection, linking their experiences to different dimensions of the knowledge base for teaching while shaping their professional identities as teachers. The research question that this study seeks to answer is: *How do pre-service teachers reflect on and interpret the perceived failures in their Natural science lessons?*

By emphasizing reflective practice, this research aims to enhance the development of PSTs' professional and practical knowledge (knowledge from practice) and promote reflection as a core competency that a teacher should possess, which is critical in the development of knowledge of practice.

## THEORETICAL FRAMEWORK

To understand the experiences of PSTs, this study adopted constructivism as the theoretical framework. Constructivist theory is premised on the thinking that people construct their own (practical) knowledge through their personal experience. This theory is derived from the philosophical proposition of the existence of multiple realities because reality is constructed subjectively by the individual, depending on the context.<sup>33</sup> The aim of the study is to develop a more practice-oriented and nuanced construction of the teaching practice experience through an analysis of the perspectives presented by PSTs themselves. Clandinin defines teacher perspectives as personal practical knowledge... a particular way of re(constructing) the past with the *intention of dealing with the exigencies of future teaching situations*.<sup>34</sup> How PSTs construct an unsuccessful lesson is influenced by their personal practical knowledge, contextual understanding, and reflective practices. These perspectives reveal the reality as experienced by PST, and the aim of constructivism is to learn how people make sense of their situations and act on them.<sup>35</sup> This is important for teacher educators because it provides insight into how PSTs perceive and navigate their teaching experiences, which directly impacts their development and effectiveness as teachers. Reflective practice is a cornerstone of teacher education. When teacher educators understand how PSTs reflect on and learn from their perceived failures, they can guide them toward more productive and deeper reflections that lead to professional growth.

## METHODOLOGY

### *Research Design*

The study adopted a qualitative approach employing a phenomenological research design to explore the lived experiences of PSTs as they construct their understanding of unsuccessful lessons. Through this lens, it aimed to delve deeply into the subjective realities of PSTs, focusing on their personal practical knowledge, contextual understanding, and reflective practices. This methodology enabled the identification of common themes and patterns in how PSTs construct the concept of an unsuccessful lesson, uncovering not only the challenges they face but also the strategies they employ to navigate these challenges.

### *Study Sample and Population*

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<sup>32</sup> DHET., "National Policy on Community Colleges. ."

<sup>33</sup> Carla Willig, "Constructivism and 'the Real World': Can They Co-Exist?," QMiP Bulletin, no. 21 (2016).

<sup>34</sup> D Jean Clandinin, F Michael Connelly, and Jon G Bradley, "Shaping a Professional Identity: Stories of Educational Practice," McGill Journal of Education 34, no. 2 (1999): 189.

<sup>35</sup> Kathy Charmaz, "Grounded Theory: Objectivist and Constructivist Methods," Handbook of Qualitative Research 2, no. 1 (2000): 509–35.

A total of 12 out of 160 pre-service teachers enrolled in the postgraduate certificate in education (PGCE) programme voluntarily participated in the study following an invitation sent via WhatsApp.

### **Data Collection**

Data used in this study were collected from the teaching portfolios PST developed during the teaching practice. Since portfolios contain purposefully organised documentation that demonstrates specific knowledge, skills, dispositions, and accomplishments achieved over time, Beka and Kulinxa suggest that they can be considered as a source of data, whether qualitative or statistical. Students were required to reflect on one lesson that they perceived as being unsuccessful and discuss why they thought the lesson did not go as they had planned.<sup>36</sup>

### **Data Analysis**

The reflective narratives of the students were analyzed thematically following the steps suggested by. The process involved (i) familiarizing oneself with the data, (ii) putting codes to selected chunks of text, (iii) collating similar codes, and (iv) formulating themes. The coding was done using the texts written by the students. The second author had an opportunity to look at the codes and make suggestions if they did not agree with the first author. Another researcher not involved with the study was given the opportunity to check whether the codes aligned with the data. Thirty (30) initial codes were formulated, which were reduced to fifteen (15) because of the similarity in some codes. Five (5) overarching themes resulted from the collating of the codes: Teacher personal characteristics, lack of pedagogical content knowledge, lack of content knowledge, classroom management, and resource challenges.

### **Ethical Considerations**

Prior permission to contact PSTs had been obtained to ensure ethical compliance. The message clearly outlined the purpose of the study, emphasized the voluntary nature of participation, and assured participants of their anonymity and confidentiality. Each participant was assigned a unique code, ranging from PST1 to PST12, where the number identifies the individual participant. This coding system was used to maintain anonymity throughout the data collection and analysis processes.

## **PRESENTATION OF FINDINGS**

### **Teacher's Personal Characteristics**

Pre-service teachers identified several factors that affected their lesson execution, with many challenges stemming from internal issues related to their personal and professional development. One of the most common concerns was the feeling of nervousness, often triggered by the pressure of being observed while teaching for the first time by learners, peers, and the mentor teacher. This nervousness was highlighted by PST2, PST3, PST7, PST8, PST9, and PST11, suggesting that the presence of evaluative figures created a high-stakes environment that heightened performance anxiety. Presented below are some of the reflections of the pre-service teachers.

*...the first lesson I ever administered; I was very nervous during that lesson because I was not used to standing in front of people (PST2).*

*Not that I am making excuses, but I was very nervous, considering that it was my first lesson ever. My voice was low, and I lacked confidence. This was only a start; it opened a whole lot of disruptions in my lesson (PST7).*

*I had thoroughly prepared for it the night before and had a lesson plan prepared. When I saw my mentor get in, greet me, take my lesson plan, and take a seat, I got nervous and started to panic (PST8).*

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<sup>36</sup> Beka and Kulinxa, "Portfolio as a Tool for Self-Reflection and Professional Development for Pre-Service Teachers."

A ripple effect was observed as this nervousness resulted in other unwelcome tendencies, which were narrated by the pre-service teachers. PST1 and PST6 reported having to rush through the content, while PST2 and PST3 reported developing a lack of confidence, PST11 felt ill-prepared or lacked composure, and PST9 was compelled to read from the textbook.

### **Lack of Pedagogical Content Knowledge (PCK)**

Another set of factors that contributed to the less successful execution of a lesson was related to the gap pre-service teachers identified in their reported PCK. PST4 assumed a familiar understanding of the content but underestimated its complexity from the learner's perspective. This assumption led to explanations that did not adequately scaffold the learning process or account for learners' varying levels of prior knowledge. PST9 identified an interesting scenario where learners argued against her scientific explanation of lightning as being caused by static charges. Below is an excerpt from PST9's reflective writing.

*The learners had different opinions about how lightning is caused since there are so many myths around the concept of lightning. The problem started there as the learners refused to believe that lightning is caused by static electricity. Because I was nervous, I started panicking when learners were making comments like "You are teaching us lies." (PST9)*

Although the teacher was familiar with the cultural beliefs related to lightning, she failed to acknowledge or engage with this understanding before transitioning to the scientific explanation. This oversight created a disconnect between the learners' prior knowledge, rooted in cultural perspectives, and the new information being presented. As a result, the learners perceived the teacher as dismissive of their beliefs and accused her of 'lying' to them. This situation underscores the importance of the knowledge of both learners and context, where teachers first elicit learners' existing knowledge and understanding of indigenous knowledge systems of local communities before introducing scientific concepts. By bridging cultural understanding with scientific explanations, teachers can foster respect, trust, and a more meaningful learning experience. PST1, PST7, PST9, and PST10 wrote that they relied too much on what they loosely referred to as the lecture method without any use of hands-on materials, despite the practical nature of the concept being taught.

*I was teaching about electrostatic forces, and I relied too much on a lecture format. I talked for too long without involving the learners in discussions (PST7).*

*I ended up owning the lesson and not giving the learners a chance to engage in the lesson. I delivered the content in a way that the learners did not understand, and I noticed that the learners did not understand. I ended up just reading what was written in the textbook (PST9).*

*During the lesson, I spent a significant amount of time explaining the concepts through a lecture format. This approach made the lesson more teacher-centred rather than learner-centred (PST10)*

The reflections, however, provided limited descriptions to characterize the lecture method beyond basic practices such as explaining notes and dictating them to learners. There was little mention of interactive elements, learner engagement strategies, or efforts to assess understanding during the lessons. This suggests a narrow interpretation of the lecture method, primarily focused on teacher-led content delivery. The outcome was the failure to engage the interest, motivation, and participation of learners in their lessons.

### **Lack of Content Knowledge (CK)**

While PST3 could not pinpoint the specific concepts she struggled to understand, she was aware that her grasp of some ideas was incomplete.

*Some of the things I didn't understand while teaching .... I remember when I was teaching resistance in grade 9; I did not understand one of the factors that affect resistance; then, in front of the learners, I asked my mentor to explain to me so that I could explain better to learners,*

*then she just smiled and said teach whatever you think it's correct and with confidence then I continued with the lesson (PST1).*

Rather than dismissing this challenge, she acknowledged her limitations, which influenced her confidence and clarity during lesson delivery. This self-awareness, though commendable, highlighted a gap in content mastery that may have impacted learners' comprehension. The situation underscores the importance of continuous subject matter development for pre-service teachers and the need for supportive mentorship to help them navigate areas of uncertainty and build both competence and confidence in teaching complex concepts. Another pre-service teacher confessed that *'when learners asked questions, I could not answer them since I did not know what it was about'*, highlighting the lack of understanding of the content they were teaching. PST11 wrote that *'I could feel that the information I was telling the learners was wrong, but at the same time, I had to keep up a straight face since I had to get the learners to have confidence in me'*. Her experience highlights a common challenge among pre-service teachers- the fear of being labelled as incompetent and the belief that teachers always have the right answers. However, this situation underscores an important teaching skill—acknowledging that one does not know everything while maintaining credibility. Modeling intellectual humility and demonstrating a willingness to learn can foster a classroom culture where making mistakes is seen as part of the learning process.

### **Classroom Management**

This theme explores the challenges in managing lesson delivery and engaging diverse learners. PST1, PST2, PST4, PST5, PST6, PST7, and PST10 reported spending excessive time explaining concepts during their lessons. This extended focus on explanation often disrupted their lesson plans, leaving them with limited time to cover the remaining content or engage learners in meaningful activities such as discussions and hands-on experiments, as reported by PST1 and PST7.

*I failed to manage time well by spending too much time on the same concepts, which also contributed to my lesson not going well (PST2).*

*This was one lesson where I really struggled to maintain control of the class and adhere to my planned timeline and lesson. As a result, I could not cover all the material that I had prepared for that lesson, and some important concepts were left unaddressed (PST5).*

*I was teaching about electrostatic forces, and I relied too much on a lecture format. I talked for too long without involving the learners in discussions (PST7).*

Consequently, some pre-service teachers (PST6 and PST7) found themselves rushing through the remaining material, which compromised the depth and quality of learner engagement. PST2 and PST5 highlighted significant challenges in managing disruptive learner behaviours during their lessons.

*I also struggled with class management; my learners would make noise during the lesson, and I was not confident enough to introduce any classroom management strategy (PST2).*

*The classroom environment was really challenging as several learners would go as far as disrupting my lessons by talking over me and answering irrelevant questions in an attempt to seek attention (PST5).*

The pre-service teachers reported that the noise levels and irrelevant responses from some learners disrupted the flow of their teaching and hindered meaningful engagement with the lesson content. These behaviours not only created a chaotic classroom environment but also demanded constant redirection, which diverted the teachers' focus from delivering the planned lesson effectively. PST5 reported significant challenges in motivating learners who appeared disengaged and uninterested in the lessons. She noted that many learners seemed to have been forced to attend school X, which specializes in Mathematics and Science, and this negatively impacted their attitude toward learning. This lack of

intrinsic motivation presented difficulties in capturing their attention and sustaining their engagement throughout the lesson.

### Resource Challenges

PST1 encountered significant challenges when the circuit board malfunctioned during the lesson. Despite her preparation, the equipment failure disrupted the flow of the lesson, creating confusion among learners and undermining the demonstration of key concepts. The unexpected technical issue not only caused frustration but also limited the teacher's ability to maintain learner engagement and effectively illustrate the practical application of the lesson content.

*I also had a circuit board that had technical issues later in the lesson and that equipment malfunctions disrupted the flow of the lesson. The learners appeared confused and disengaged because they were struggling to understand circuit diagrams (PST1).*

This incident highlights the importance of contingency planning for practical science lessons. Pre-service teachers should be encouraged to test equipment beforehand and develop backup strategies, such as simulations, alternative demonstrations, or guided discussions, to ensure that learning objectives can still be met in the event of technical failures. Building resilience and adaptability in the face of such challenges is a crucial component of professional growth in teaching.

### DISCUSSION

The study aimed to explore the factors that pre-service teachers perceived as contributing to the less successful execution of their lessons. It focused on uncovering their reasoning behind these perceived challenges and investigating whether they could relate these difficulties to specific dimensions of teacher knowledge, such as content knowledge PCK, general pedagogical knowledge, and knowledge of learners and context. Pre-service teachers attributed some of their challenges to personal characteristics, particularly the nervousness stemming from stage fright. This anxiety was heightened by the pressure of standing before a class for the first time while being observed by learners, peers, and the mentor teacher. The emotional responses underscore the importance of gradually increasing teaching responsibilities for pre-service teachers. Such exposure allows them to develop essential skills for managing and regulating their emotions, fostering resilience, and building self-confidence. Ji et al. report that nervousness is the most typical emotion in preservice teachers' teaching practices.<sup>37</sup> Unfortunately, such nervousness can lead to unintended consequences. Pre-service teachers reported a loss of confidence, an observation made by Nunez-Regueiro, difficulties in classroom management, and challenges in engaging learners in meaningful and interactive learning activities.<sup>38</sup> This lack of engagement often resulted in a rigid, teacher-centred approach, further diminishing opportunities for effective learner participation and understanding.

The lack of pedagogical and/content knowledge (P/CK) was also identified as a significant factor contributing to the less successful execution of lessons. The majority of the reflections of the pre-service teachers highlighted a predominant reliance on what they loosely described as a lecture-based approach to teaching. This approach typically involved the teacher explaining content while simultaneously dictating notes for learners to transcribe. Although a few references were made to discussions and demonstrations, these were often peripheral rather than central to the lesson structure. Some pre-service teachers even reported being unable to incorporate discussions or demonstrations due to time constraints or the pressure to cover extensive content. This suggests a rigid adherence to teacher-centred methods, limiting opportunities for learner engagement and interactive teaching practices.<sup>39</sup> The reflections revealed that this approach mirrored the teaching practices they observed from their mentor teachers

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<sup>37</sup> Yilong Ji et al., "Pre-Service Teachers' Emotional Experience: Characteristics, Dynamics and Sources amid the Teaching Practicum," *Frontiers in Psychology* 13 (2022): 968513.

<sup>38</sup> Fernando Núñez-Regueiro et al., "'Motivated to Teach, but Stressed out by Teacher Education': A Content Analysis of Self-Reported Sources of Stress and Motivation among Preservice Teachers," *Journal of Teacher Education* 75, no. 1 (2024): 76–91; Jiyane and Gravett, "The Practice Learning Experiences of Student Teachers at a Rural Campus of a South African University"; John, Smith and Emily Johnson, "Comparative Religious Education in the 21st Century," *Journal of Educational Reform* 15, no. 1 (2019): 89–102.

<sup>39</sup> Smith and Johnson, "Comparative Religious Education in the 21st Century."

during classroom observations.<sup>40</sup> As a result, pre-service teachers often replicated these practices, perceiving them as the normative standard for effective teaching. It is unrealistic to expect pre-service teachers to adopt teaching practices that deviate from those demonstrated by their mentor teachers. Mentorship plays a critical role in shaping the instructional approaches of novice teachers, as they often view their mentors as authoritative role models for effective teaching. As suggested by Kasapoglu et al., there is a need for mentor teachers to expose pre-service teachers to a diverse range of teaching approaches that are more learner-centred and responsive to the needs of the learners.<sup>41</sup>

The lack of content knowledge reported by some pre-service teachers can largely be attributed to their diverse academic backgrounds. The PGCE programme enrolls students from various disciplines, including pure sciences and environmental sciences. Those from environmental science backgrounds often lack exposure to certain core science topics typically covered in pure science programmes. As a result, it was not surprising to encounter instances where pre-service teachers presented inaccurate information during lessons. This highlights the need for targeted content support and bridging programmes to ensure all pre-service teachers develop the necessary subject knowledge for effective science instruction. The study by Mavuru and Pila has also revealed content areas that pre-service teachers identified to be difficult to teach.<sup>42</sup> Meanwhile, Du Plessis and Dreyer reported that mentor teachers expressed concern over pre-service teachers' limited professional knowledge, which encompasses not only content mastery but also effective teaching strategies and classroom management practices.<sup>43</sup>

The challenges pre-service teachers face in managing time and learner behaviour reveal a concerning pattern. Many reported difficulties in structuring lessons effectively, which led to poorly managed class time and disruptive learner behaviour. This suggests a deeper issue: a lack of adequate planning and preparation, or insufficient guidance and support from mentor teachers. Lack of adequate support has been reported by pre-service teachers in other studies.<sup>44</sup> Without adequate support and guidance in lesson planning, pre-service teachers are more likely to struggle with pacing their lessons, addressing behavioural issues, and keeping learners engaged. This highlights the need for mentor teachers to be proactively engaged in their mentorship roles to guide pre-service teachers in developing and implementing effective lesson plans, time management strategies, and classroom management techniques.<sup>45</sup>

While the effort to involve learners in hands-on activities is commendable, the pre-service teacher's failure to have a contingency plan in place after the malfunction of the circuit board reveals a significant gap in planning skills. Effective teaching, particularly with hands-on activities, requires not only the ability to engage learners but also the foresight to anticipate potential challenges and prepare alternative solutions. The absence of a backup plan for technical issues, such as equipment malfunctions, highlights the need for pre-service teachers to develop strong problem-solving and adaptability skills. This situation underscores the importance of comprehensive lesson planning, which includes not only the primary activity but also potential alternatives, ensuring that the lesson remains productive and engaging even when unexpected issues arise. Mentor teachers can play a key role in guiding pre-service

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<sup>40</sup> Koray Kasapoglu, Bulent Aydogdu, and Ozgun Uyanik Aktulun, "Exploring the Resonance between How Mentor Teachers Experienced Being Mentored and How They Mentor Pre-Service Teachers during Teaching Practice," *South African Journal of Education* 43, no. 2 (2023).

<sup>41</sup> A Glover et al., "Finding the Joy: Effective Mentoring in Teacher Education," *Mentoring & Tutoring: Partnership in Learning* 32, no. 4 (2024): 377–94.

<sup>42</sup> Lydia Mavuru and Onicah Koketso Pila, "Pre-Service Teachers' Preparedness and Confidence in Teaching Life Sciences Topics: What Do They Lack?," 2021.

<sup>43</sup> Anna Elizabeth Du Plessis and Johann Dreyer, "Reflections on Initial Teacher Education and Theoretical Framing of Applied Pedagogical Knowledge with a Context-Consciousness: An International Study," *Education Sciences* 14, no. 5 (2024): 448.

<sup>44</sup> P J H Heeralal, "Mentoring Needs of Pre-Service Teachers during Teaching Practice. A Case Study at a South African University," *Assessment* 34 (2014): 82–87; Jiyane and Gravett, "The Practice Learning Experiences of Student Teachers at a Rural Campus of a South African University"; Tafirenyika Mafugu, "Science Pre-Service Teachers' Experience with Mentors during Teaching Practice," *Eurasia Journal of Mathematics, Science and Technology Education* 18, no. 11 (2022): em2170; Hawa Mpate, Glenda Campbell-Evans, and Jan Gray, "Pre-Service Teachers' Preparedness to Teach during Teaching Practice in Tanzania," *African Journal of Teacher Education* 12, no. 1 (2023): 95–120; Clever Ndebele, Dagogo William Legg-Jack, and Hennades T Tabe, "Understanding Preservice Teachers' Perspectives on Challenges Experienced during Work Integrated Learning," *EUREKA: Social and Humanities*, no. 4 (2023): 48–58.

<sup>45</sup> Glover et al., "Finding the Joy: Effective Mentoring in Teacher Education."

teachers to think proactively, emphasizing the need for flexibility and preparedness in their instructional planning.

## RECOMMENDATIONS

The factors identified by PSTs revealed a lack of adequate mentoring by the host teachers, a fact that keeps recurring in our visitations to schools during teaching practice. Based on the findings from this study, we suggest the need for mentor teachers to provide deliberate, intentional, structured mentoring, considering that it is an extra load in addition to their normal teaching duties. Such mentoring is essential because transformative professional learning requires purposeful guidance, targeted feedback, and reflective engagement to support PSTs in developing the knowledge, skills, and professional identity necessary for effective teaching. In addition, deliberate mentoring enables mentors to systematically identify gaps in pre-service teachers' knowledge and practice and effectively address these shortcomings through targeted guidance, constructive feedback, and tailored professional support.

## CONCLUSION

The purpose of the study was to enhance the development of PSTs' professional and practical knowledge (knowledge from practice) and promote intentional reflection as a core competency that a teacher should possess. By viewing the lived experiences through a phenomenological lens, the study sought to uncover how PSTs characterize and make sense of unsuccessful lessons. The factors identified by pre-service teachers as contributing to less successfully executed lessons were predominantly personal, curricular, and pedagogical in nature. Personal factors included emotional responses such as nervousness and a lack of confidence, which hindered their ability to perform effectively in the classroom. Curricular factors involved gaps in content knowledge, particularly for those with academic backgrounds outside of pure science, limiting their ability to teach specific topics with accuracy and depth. Pedagogical factors reflected an over-reliance on the lecture method, which often resulted in passive learning environments, as well as weak classroom management techniques that led to issues with maintaining order and engagement. Together, these personal, curricular, and pedagogical challenges shaped the pre-service teachers' teaching experiences, influencing their overall effectiveness and approach to lesson delivery. This study provides a picture of the gaps in mentoring practices adopted by mentor teachers in rural schools.

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