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Editorial

Advancing Phenomenology as an Emerging Field of Research in Education in South Africa

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Phenomenology as a field of research is slowly on the move in certain Faculties of Education in South African universities, including Cape Peninsula University of Technology, University of the Western Cape, Stellenbosch University, Rhodes University, University of Pretoria and the University of KwaZulu-Natal. It is in these institutions of higher learning, although mainly in postgraduate studies, where small strides are being made to advance the field of phenomenology. This special issue under the theme “Exploring teaching and learning under the lens of phenomenology” is yet another attempt to give impetus to the field to encourage more South African academics to reimagine or reinvent the theoretical lenses for their research. The question that arises here is: “Why is there a need to advance the field of phenomenological research in South Africa?”

Kierkegaard (1973), who is considered by many to be ‘the father of existentialism’, averred that human existence cannot be accurately articulated in a conceptual system that reduces a person’s lived experiences to mathematical formulae. These mathematical analytical scientific methods, which many modern natural science researchers and positivist educational researchers often apply to provide depth and rigor to their research findings, are valuable research tools to enhance our understanding of many things in the world, but they are reductive and not very helpful in explaining the invisible interior of lived experience from

a distance. It is for this reason that Kierkegaard (1973) pointed out that the true meaning of human existence can only be found in the invisible depths of *living* – the fluid dynamics of the depths of lived experience. To phenomenologists, this realm of the dynamic structures of lived experience, with specific reference to a person’s relationship with themselves, with other human beings, with non-human living things and with non-living objects in the world, is what forms the most significant aspect of what phenomenologists are interested in knowing. This raises another interesting question: “How do phenomenologists plunge into the depth of lived experience to conceptualise and contextualise a phenomenon in order to articulate the nature of the lived experience precisely?” This is where the philosophical texts of the canonical phenomenological writers such as Husserl (1970), Heidegger (1967), Merleau-Ponty (1962) and Jean-Paul Sartre (1988) provide phenomenological scholars with the philosophical tools to *describe* and *reduce* the *essences* and *intentionality* of a person’s lived experiences in the world. In Merleau-Ponty’s approach, the term ‘*description*’ refers to accurately capturing and explaining a phenomenon as the person experiences it. This means the adoption of Husserl’s mantra of remaining true to or returning to the ‘things in themselves’ (Husserl, 1970, p. 252). When a researcher *describes* an experience she enters into the realm of *reduction*, which requires her to bracket the *self*, by applying the principle of the epochè, which is to place the research participants experience at the

centre of the investigation. This is where the researcher must suspend all preconceived assumptions about a phenomenon, which gives the researcher more clarity and focus so that she can remain true to the “things in themselves” (Merleau-Ponty, 1962). When a phenomenological researcher applies the concepts of *description*, *reduction* and *essences*, it takes her to the core meaning of an individual’s experience of any given phenomenon, that is, *intentionality*. As such, *intentionality* refers to the inner invisible system of thought behind human consciousness (Merleau-Ponty, 1962). In simple terms, *intentionality* is the total meaning of an object that can only be found in consciousness. This is what Husserl means when he said that consciousness is not something that belongs to the interior realm because it pushes out towards the world. This is how phenomenology provides a method to understanding human existence.

Therefore, as an individual (research participant - learner/student/teacher/lecturer) stands at the center of the world (of teaching and learning), it is crucially important that researchers shift their focus to understanding what it means to be in her body. In other words what is it that happens in her mind? What is it that she feels? What does she think about? What is it that inspires or demotivates her? At this juncture we want to shift the focus to how these questions can assist in improving the quality of teaching and learning in South Africa. Can our failure to answer these questions accurately be attributed to why we have had numerous curriculum revisions over the last three decades in the South African educational context? As educational researchers it is important that we find ways to understand our teachers and students better, as they are the main active role players in the education system. Therefore, to develop a deeper understanding of human existence, given the complexity of the human psyche, which is shaped and influenced by experience as

lived and its (psyche’s) effect on teaching and learning, we believe that more phenomenological research is needed in South Africa. Such research not only allows the researcher to make visible the invisible conditions of subjective life as a teacher or learner, but also provides access to their respective inner landscapes to understand their reasoning, perceptive fields, behaviour, emotions and passions, among many other factors, which all form part of the broader plenum of the human mind.

Over the last few years, as educational researchers who ventured into the scholarship of phenomenology in our research endeavours, we have come to realise how dependent we were/are on European and North American scholars, where phenomenology as a movement in education continues to grow. Through the works of these scholars abroad, we were introduced to the work of Max Van Manen, a Dutch emigrè who brought the scholarship of phenomenology to Canada; Ted Aoki, a Japanese-born Canadian scholar who used phenomenology to expand the field of curriculum studies in Canada; and various other American scholars, such as Maxine Green, Dwayne Huebner, Madeleine Grumet and William Pinar, who all grounded their work in phenomenology. According to Pinar and Reynolds (2015), Dwayne Huebner was the first American scholar in the 1960s to introduce phenomenology into the field of curriculum studies. His colleague Maxine Green, like Huebner, also drew heavily upon phenomenology, in particular cognate philosophies such as existentialism, in her field of performance art. Green invoked the concept of a “phenomenology of the imagination” to articulate the nature of teaching and learning in America. There is a rich tradition of phenomenology in the global north that is continuously on the move. Therefore, we believe that time has come to establish a first generation of South African phenomenological scholars who could contribute greatly to expanding our

understanding of curriculum issues with its two wings of teaching and learning in schools and universities. This special issue is a good start to give impetus to the phenomenological movement in education in South Africa.

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Teaching and Learning: A Phenomenological Perspective

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ABSTRACT

This article presents the author's reflections on teaching and learning from a phenomenological perspective. Drawing examples from research regarding student learning during study abroad experiences, research exploring therapist and client perspectives on their shared psychotherapy sessions, and the author's experience in teaching an orientation course for undergraduate students, this paper considers the following themes: learning via experience, learning in relationship, and learning by doing. Learning via experience highlights the importance of facilitating new experiences and recognizing that novelty may elicit anxiety for students on the path to transformational learning. Learning in relationship underscores the collaborative and dialogical nature of teaching and learning. This aspect of learning is discussed in terms of Smith's (1998) portrayal of original argument, as well as Bazerman's (1988) critique of academic discourse and its implications for traditional approaches to teaching. Learning by doing emphasizes the interconnectedness of knowledge, attitude, and application described by Amadeo Giorgi (1975) in his phenomenological study of learning. Martin Heidegger's (1962) distinction between the present-at-hand and ready-to-hand modes of engagement are also shown to be relevant to this feature of learning, with the implication that the application of knowledge should be a central part of teaching. The paper integrates these themes to suggest that teaching phenomenologically entails attending to the lived experience of students and approaching teaching as an engaged - and engaging - activity.

Keywords: Phenomenology, Learning, Experience, Relationship, Learning by doing.

1 TEACHING AND LEARNING: A PHENOMENOLOGICAL PERSPECTIVE

How can phenomenological psychology inform teaching and learning? If the goal of phenomenology is to understand experience as it is lived, then phenomenological psychology may orient us to students' lived experiences – and in the process ground our efforts as educators to engage with those experiences. In the following paragraphs, I aim to explore this issue, and to do so phenomenologically. In other words, I'll approach this question from the ground up, presenting concrete examples and

drawing from these the ideas and values that comprise my approach to teaching and learning.

Before turning to my examples, there are a few important issues to address. The first of these is that of my position with respect to the question posed. For over 30 years, I have been an academic and clinical psychologist whose research, teaching, and clinical work have been informed by phenomenological psychology, primarily as practiced in the United States. This approach to psychology, initially articulated by Amadeo Giorgi (1970) at Duquesne University, and further developed by Colaizi (1973), Wertz (1984),

Halling and Liefer (1991), Walsh (1995; 2003; 2004), and Churchill (2000; 2021), among others, entails discerning from the reflective accounts of participants common features of their experiences. These common features, initially termed essential structures, are then examined for what they might reveal about the experience, or phenomenon, of interest. While there has been an ongoing debate as to whether this approach to research is primarily descriptive or interpretive, with contrasting positions typically citing Husserl or Heidegger in support of their claims (Walsh, 2012), both approaches can perhaps best be situated within the pragmatic phenomenology articulated by Mark Okrent (1988) and Hubert Dreyfus (1991).

As noted above, phenomenological psychology as a method entails distilling from the particulars of experience common features that are deemed essential to that experience. However, the meaning of essential must be clarified. As proposed by Amadeo Giorgi (1985), drawing from Edmund Husserl (1970) and Maurice Merleau-Ponty (1963), the essences sought in phenomenological research are those features without which the phenomenon would be otherwise – or, put differently, they are the features that make the phenomenon what it is. Through the process of free imaginative variation, “one describes the essential structure of the concrete lived experience” (Giorgi, 1997, p. 251). However, the question of for whom these features are essential is of crucial concern. As noted by Klein and Wescott (1994), phenomenological psychology has evolved to understand essential structures not as universally true but rather as essential to the examples and experiences given. In this way, its findings are in line with those of a case study, allowing readers to consider the relevance of conclusions to their particular experiences and understandings. My impressions here are offered in a similar spirit. Hence, to emphasize the title of this essay, the reflections that I

offer are a phenomenological perspective rather than the phenomenological perspective. To the extent that my observations may differ with those of the reader, I hope that those differences may be productive.

In the paragraphs that follow, I hope to illustrate what I have come to see as three important constituents of learning: learning via experience, learning in relationship, and learning by doing. The first two of these are drawn from phenomenological research, the first a study of students’ experiences of learning while studying abroad, and the second from research regarding the experience of psychotherapy from the perspectives of the psychotherapist and client engaged in that therapy. The third example is from my own experience as instructor for an undergraduate course at Duquesne University. Although this last example is not drawn from formal phenomenological research, it is offered as a concrete example relevant to the focus of this essay.

2 LEARNING VIA EXPERIENCE

The first of my examples entails phenomenological research regarding students’ perspectives on learning over the course of a study abroad program at Duquesne University (Walsh & Walsh, 2018). While much has been written about educational exchanges and study abroad programs, the value of these programs typically has been framed in terms of broad concepts such as intercultural competence (Salisbury, An & Pascarella, 2013) or global understanding (Smith & Metry, 2008). In contrast, this research asked students to describe in their own words what they learned as a result of their study abroad experiences. This study interviewed 8 students prior to their study abroad semester (to understand their expectations), at the midpoint of that semester (to comprehend their experiences while studying abroad), and upon their return to their home university (to

appreciate the learning they ‘brought back’ with them).

Prior to their semester abroad, most participants voiced the expectation that they would learn the Italian language during their semester in Rome, and all anticipated some form of personal growth, such as an increase in independence and self-reliance as well as adaptability. Most anticipated learning from experience, looked forward to the experience of traveling, and voiced the expectation that the structure and content of their academic learning would be different. Yet they also expressed fears about the unknown aspects of the semester ahead of them, as well as their capacity to deal with them (e.g., “once I’m there, I’m there and there’s no going back”; “my major concern, which I am worried about, would be homesickness and hoping that I can deal with that”; “I’m going to be there for a whole semester and I just can’t go home – I’ll definitely miss the home life and my family”).

At the time of the mid-semester interview, only half of the participants referenced learning the Italian language, and all but one spoke of this in negative terms. Almost all participants described themselves as learning about and experiencing cultural differences (“it really amazed me how people could be so different”, “I learned a lot... kind of being immersed into a different culture”; “I’ve been exposed to a completely different type of people... and it’s an everyday thing”; “I learned to just be a lot more understanding of the culture here”) and spoke about increased independence (“I’m learning to be more independent, definitely, here”; “I don’t feel as afraid to explore places”; “I’m not the follower anymore... I’m the one figuring things out for myself”) and a sense of confidence, as well as greater openness and acceptance (“I find it easier to be myself and to just feel relaxed in a situation, and not be worried”; “I think I’m learning to be more

accepting... and open-minded”; “being here is such a great experience just to broaden my horizons, just be a little more content with who I am, and my limits and what I’m flexible with, and what I can and cannot do”). A majority expressed surprise and satisfaction regarding the friendships and group cohesion that were developing amidst their cohort. They described these relationships as collaborative and supportive, and referred to the unexpected benefits of interacting closely with peers having different interests, prior experiences, and religious beliefs. Half of the participants reported learning as a result of their decreased use of technology, such as cell phones and social media (in particular, that they could get by without them). Regarding their academic learning, six participants enthusiastically noted the benefits of on-site learning (e.g., a course in art taught via museum visits, and a history course taught via visits to archaeological sites).

Following their return from a semester in Rome, all of the participants reported gaining a strong sense of independence and self-confidence as a result of their study abroad experiences. (e.g., “I can do so much more than I ever thought possible... and learned that I could be independent and not be scared of trying new things and challenging myself”; “I am more independent and like I’m proud of that”). Three participants referred specifically to increased organizational skills as a result of the semester abroad (“I definitely learned time management skills while I was over there”; “I feel like now I’m using my time wisely”), and four described an increased openness (“it definitely opened my mind... and I think I also learned to be less judgmental of people”, “it just kind of opened my mind”; “just getting a different perspective ... certain situations I’ll now look at in two ways instead of one”). The particular experiences that facilitated

students' independence and self-confidence included experiencing and negotiating cultural differences as well as learning specific travel and organizational skills. Appreciating cultural differences was also reported by the vast majority of participants. The experiences that facilitated this included accommodating to social customs as well as perceived attitudes and values of Romans. Some of these differences were characterized as highly positive (such as those pertaining to a more relaxed pace of life), while others were portrayed as negative (such as those regarding inefficiency). With respect to academic learning, a majority of students recalled positively the benefits of on-site classes, but there was no mention whatsoever of the courses taught on campus that semester. Only one student referenced learning the Italian language.

Four of the eight participants reported learning as a result of their decreased use of technology, such as cell phone and social networking ("I thought I always had to be, not like dependent but I like kind of needed technology in my life. But I really don't", "when I came back here I'm not as dependent on technology", "I was also able to break away from technology and that was really nice ... a learning experience"; "I learned how to function without a cell phone"). Regarding their academic learning, six participants enthusiastically recalled the structure of on-site learning and its benefits ("I think seeing the stuff that you're talking about is a lot more beneficial than seeing it in a book or something", "part of the reason I probably learned so much is that you could go and see it instead of... stuff you just read about in a book").

The theme that showed the most significant shift across time was mention of the friendships and group cohesion experienced among the cohort of students. While no one mentioned this as an expectation during the

pre-semester interviews, it later emerged as a highly valued aspect of the students' experiences. For several, this was related to the theme of openness and accommodation, as the experience of living in close proximity to, traveling with, and relying on students different from themselves was described as "learning to be more accepting" regarding differences among students. Another trend over time was a transition from anticipatory fears and concerns to affirmative statements about learning – in other words, prior to their semester abroad students noted fears about what they didn't know, and afterward they spoke only in terms of what they had accomplished. It was also noteworthy that some participants' retrospective accounts (e.g., "I think of myself as a pretty independent person, but now I'm even more so") seemed to contradict initial accounts ("Being away from home that long... that's definitely one of the concerns I have, because I've never really been that far away from home") such that their history was to some degree revised in light of their new perspective. This suggests that learning may transform not just one's current experience, but one's memory of prior experiences.

Learning in Relationship

A second example concerns the learning evidenced in a psychotherapy session, as understood by both the therapist and client engaged in phenomenological research regarding the psychotherapy process (Walsh, 1995b). While psychotherapy is not typically framed in terms of teaching and learning, I include this example for two reasons. First, this study of client and therapist perspectives showed both individuals understanding shared "good moments" as involving learning on the part of client. Secondly, to the extent that teaching is not seen as the typical task of the psychotherapist, this example allows us to consider aspects of teaching and learning less explicit in the context of the classroom.

This study entailed having a therapist and client who were engaged in long-term psychotherapy view videotaped recordings of their sessions, for the purpose of identifying and describing what each perceived as “good moments”. One noteworthy finding was that there were considerable differences between the specific good moments selected by the therapist and client (with the therapist identifying 9 moments, and the client identifying 20). However, amidst these differences the therapist and client both selected one moment, which was preceded by discussion regarding the client’s upcoming court for his arrest for driving while intoxicated. The client stated that if the judge asked the “wrong question”, he’d lose his temper and respond angrily. When the therapist called into question this statement and urged caution, the client insisted that, if provoked, he’d fight back. The selected moment then unfolded as follows:

Therapist: I’d like to understand that... because it seems really critical in a lot of things we’ve talked about.

Client: Because I’ve always had that feeling... I’ve always had for years, of thinking that... if you do something out of fear, then I always punish myself afterwards. So, if I’m afraid that the judge will do, and I compromise the way I truly feel, I’ll punish myself ... mentally. It will bother me for years.

Therapist: If you do something out of fear... you become what, less of a person in some way?

Client: It just bothers me.

This moment continues with the therapist and client debating, the therapist encouraging moderation and the client arguing at first that he’ll “lose control”, and then that he’ll “probably go with the standard line my lawyer feeds me.” It then proceeds as follows:

Therapist: It... we may... I’d like not to... I’m not talking really specifically about what you’ll do on Tuesday.

Client: Yeah, I know you’re not. And I’m... now you’re getting me to dwell on it, and unfortunately... about my compromises and how I take on fearful situations, or... situations where I should compromise.

Therapist: Where you might compromise. That’s a...

Client: I guess we all compromise. I’m constantly compromising, aren’t I?

Therapist: “Compromise” and “moderate” seem to be similar sorts of words and I’m wondering, in terms of your goals for a more moderate life, if it doesn’t imply compromise sometimes experiencing a little bit of fear, experiencing a little bit of loss of control, perhaps but without it being total.

Client: We all compromise, you know? It’s an unrealistic statement. More than likely, I’ll just compromise when the (court date) comes.

From the therapist’s perspective this moment was good because:

Okay, so I say, “I’m not talking just about Tuesday,” and he says, “I know you’re not” in what feels like a real genuine way. And he says, “you’re talking about how I deal with fear situations... and restates some of the things we’ve been talking about... like he knows we’re not just doing a behavioral analysis of a situation but understanding himself more. And when I summarize something and he says, “uh huh,” that’s kind of nice, but when he summarizes what we’re talking about and it does seem to be critical to the kinds of things we’ve been talking about, this feels more like we’ve been... like we’re getting somewhere or that we’re understanding each other. It’s a moment that feels good to me because he seems to get it, something about

himself that he's understanding in a different way.

From the client's perspective:

At about here, (the therapist) challenges (my) last statement... and the challenges are good. In other words, he doesn't put it as a direct challenge, he goes, "I'd like to understand this." And, of course at the time it seemed to make sense to me – why I felt this way. But I realized that basically it's an unrealistic ideology... It brings out to light to me, but not at the moment, that it was wrong... He says, "hopefully you'll be able to compromise and not lose a part of yourself" – in other words, he gets his point across discretely, without, you know, my seeing it or not. Little statements like that bring it to a head... I'm learning. I'm getting, hopefully, closer to what's healthier thinking.

As shown above, while both participants viewed this segment of therapy as a good moment, they describe it somewhat differently. What the therapist sees as mutual understanding that facilitates insight, the client portrays as being challenged by the therapist in a "discrete" or unprovocative manner. Nonetheless, both see the result as the client learning or understanding something in a novel way.

3 LEARNING BY DOING

A third example of teaching and learning is drawn from my experience in teaching an orientation course for undergraduate students at Duquesne University. Approximately 15 years ago, a course entitled Orientation to the Psychology Major was added to the undergraduate curriculum. This course purported to provide students with the necessary skills to navigate their way through the requirements and expectations for psychology majors. Its content included (a) overview of the major requirements, (b) introduction to the writing conventions of the American Psychological Association (known as APA

style), (c) discussion of the career prospects and options for graduate training following an undergraduate degree, as well as the steps necessary to pursue these trajectories, and (d) instruction regarding the composition of a resume or curriculum vitae.

For the first decade of the course, the orientation topics were addressed the way much instruction occurs in universities: via lecture. Students were taught about major requirements, APA style, career and graduate school options, and the basic structure of a resume or curriculum vitae. However, despite this instruction, portfolio assessments showed that most students continued to approach graduation uncertain and confused regarding curricular requirements and postgraduate options, showing repeated errors with following APA style in their writing, and without having a resume or curriculum vitae prepared for whatever steps they planned to take following attainment of their undergraduate degree. In other words, it didn't seem like they were learning what they were being taught.

When I prepared to start teaching this course several years ago, I redesigned the course so that each of the topics was addressed not via lecture but by guiding students through the process of doing the tasks expected in the application of the content previously presented through lecture. Thus, with the overview of major requirements, students were asked to draw out a plan with a specified timeline and with specific courses for their prospective journey through the psychology major. Regarding the conventions of APA style, students were asked to apply those conventions in a brief writing assignment, with extensive feedback on any errors in this regard. With respect to their options post-graduation, students were required to both meet with one-on-one with a career counselor to work collaboratively on a post-graduation plan, and to conduct specific

internet searches of the various degree programs relevant to their interests and aspirations. Lastly, in accord with their specified plans for post-graduation, students were required to draft either a resume or a curriculum vitae, for which they were given detailed feedback.

The changes to the design and implementation of the orientation course have now been in place for five years. While there are still students uncertain about their futures as they near the attainment of their undergraduate degrees, we now rarely see errors in their scheduling of required courses, or confusion about their options following attainment of their degree. Moreover, students report being aware of the resources they can draw upon to navigate the paths to their future, and willing to seek out and draw upon these resources as needed. With respect to the conventions of APA style, there has been less success: while we have noted some instances of student improvement in this regard, errors are still quite evident in students' writing throughout their undergraduate careers. Perhaps, given that students pursuing an undergraduate degree are likely to be enrolled in some courses with different writing conventions, and that APA style is relevant primarily for those who pursue postgraduate degrees, expecting the application of these standards across all students may be unreasonable. Alternatively, teaching these standards may require more repeated exposure and practice.

4 ESSENTIALS OF TEACHING AND LEARNING

The examples above suggest three distinct aspects regarding the phenomenology of learning. The first of these, learning via experience, underscores the ways in which learning is more than a cognitive collection of facts. Indeed, it can be argued that transformative learning by its very nature entails accommodation, or an alteration in our

manner of understanding. Here the phenomenological emphasis on experience as lived seems particularly apropos, in that transformative learning is a change in one's engagement with the world. As noted by Giorgi in his phenomenological research (1975), "learning is ultimately defined as an attitude", or what one learner described as a "new way of looking" (p. 97). This new way of looking is linked with knowledge and its application.

The implications for teaching phenomenologically are this: we foster transformative learning by facilitating new experiences. However, new experiences often provoke anxiety (Fischer, 1970), in that they challenge habitual ways of navigating one's way in the world. It is for this reason that many students procrastinate, as doing so avoids – at least for the moment – the threat of uncertainty that new learning entails. The students studying abroad moved through their anticipatory anxiety and gained a strong sense of independence and self-confidence as a result of their experiences. This movement through anxiety was facilitated by the fact that there was no turning back once the students arrived in their novel environment. In classroom learning the choice to avoid moving through anxiety is more readily available, particularly because the technological devices on which so many of us rely provide a multitude of stimuli to turn toward, and hence away from the learning task or challenge. It is noteworthy that a number of students in the study abroad research reported learning as a direct result of their decreased use of cell phones and social media.

While study abroad by its very nature invites novel experiences, classroom instruction poses more significant challenges. The study abroad students contrasted knowing a collection of facts about a particular culture, archaeological site, or work of art with being present to those phenomena. Similarly, their

appreciation for cultural differences came more from the experience of being together with different others than from theoretical understandings of such differences. Hence openness to experience entailed stepping away from insular forms of technology and towards engagement with novel situations and others. As teaching via technology becomes a dominant feature of education, we must consider ways to use technology in the service of facilitating new experiences and engagement with others.

It should also be noted that students' expectations of what would be learned differed from their experiences of what they learned, to the degree that their recollections were changed by the experience of learning. In other words, as a result of their learning experiences students revised their perspectives and even their memories of what they thought prior to those experiences. Their experiences changed not just their sense of who they are, but also their memory of who they were. Hence students' memories of fears and insecurities were overwritten by memories of courage and determination, such that their stories of who they were and now were changed. And one of their goals – learning the Italian language – for most students vanished from their retrospective accounts. This again underscores the transformative nature of learning.

The changes over time in students' accounts of learning has implications for the assessment of learning. First, it suggests that assessments should begin with baseline information so that learning outcomes can be interpreted in relation to students' starting points. More significantly, to the extent that learning entails changes in the language and recollection of baseline knowledge, qualitative assessment may offer the kinds of thick description (Ryle, 2009) that allow us to understand the cognitive changes as students acquire new knowledge.

The second set of examples from psychotherapy research highlight the

collaborative and dialogical nature of teaching and learning. In academic settings, the character of original argument (Smith, 1998) – openness to dialogue – is often neglected in favor of eloquence and certainty (Walsh, 2012). This follows the evolution of academic discourse from one of dialectic and discussion to the rhetorical assertion of truth (Bazerman, 1988; Smith, 1998), which in teaching has been mirrored by a shift away from Socratic learning to structured presentations of facts. Recognizing the importance of learning via conversation requires attending to “the clear interpersonal context of learning” (Giorgi, 1975, p.98).

In the psychotherapy excerpt cited above, what starts out as a rather oppositional interaction becomes collaborative when the participants acknowledge their different positions alongside their commitment to find a solution together. This is possible because the learning takes place within the context of a relationship, one which strives for mutual understanding. Nonetheless, amidst this relationship remain profound differences in perspective. There was little consistency in what the therapist and client considered to be “good moments”, and the moment on which they did agree was understood in quite different terms. Prior phenomenological research comparing the experiences of client and therapist in psychotherapy (Fessler, 1983) similarly showed that their perspectives are often quite distinct from one another. In one particularly glaring instance, about an interaction that the therapist experienced as mutual understanding, the client said he “didn’t know what he was talking about” (p.43). As educators, how often might our impressions of a good lecture be met with a similar response by our students? Fessler noted that in retrospect that the psychotherapy client “described very little of the content of what had been said and remembered primarily a global experience of being either understood or misunderstood”

(p. 41). Perhaps also in the context of the classroom, students recall from teachers not the transmission of specific facts, but an attitude of respect for and interest in the student's worlds that engages them in the process of learning.

Our challenge as teachers is to remain cognizant of the gap between our experience and that of our students, and to affirm that "learning is a radically inter-human phenomenon (Giorgi, 1975, p. 98). We should assume misunderstanding as a likelihood among divergent histories and experiences, and work to navigate these gaps through careful listening and discussion. Here as in psychotherapy, more important than getting it right may be communicating the desire to understand one another's' perspectives.

Learning via relationship again highlights the importance of gleaning student perspectives in the assessment of learning. While this may seem obvious, what are often viewed as student perspectives are in fact student responses to teacher perspectives. By their very nature, surveys and objective instruments filter students' points of view through the sieve of instructor or assessor discourse. This points to the promise of phenomenology with respect to the assessment of learning: by listening to students in their own words, we may better comprehend their learning experiences.

The third set of examples, addressing learning by doing, highlight the practical aspects of learning. Too often in academic settings we privilege forms of knowledge that are abstract and divorced from their practical application – knowing that rather than knowing how. But as Giorgi points out, learning, is "the relationship between one's knowledge, attitude, and behavioral application that constitutes the content of learning" (1975, p. 97). Thus, a phenomenology of learning must consider all of its dimensions. The example cited above,

introducing students to the practical steps involved in navigating one's way through a particular program and curriculum, is admittedly quite amenable to learning by doing. Nonetheless, to the extent that any learning involves its application, we must recognize application not simply as an outcome for the assessment of learning, but as a crucial constituent of learning itself.

Martin Heidegger's (1962) distinction between the present-at-hand and ready-to-hand modes of engagement are relevant to this feature of learning. The present-at-hand mode (*Vorhandenheit*) relates to a world of objects and principles by which we conceptualize those objects. Much of academic knowledge is organized and presented in this way. However, for Heidegger the ready-to-hand mode (*Zuhandenheit*)— our practical engagement with the world – precedes abstract, theoretical knowing. Our challenge as educators is to ground our teaching in students' worlds, so that its relevance to lived experience is apparent. For some topics this is easier said than done, but regardless of content I try to begin plans for instruction with the question, how is this relevant to the lived experience of my students? This may entail starting with an experiential exercise or drawing from popular culture and real-world examples. In each instance I am trying to enter the present-at-hand mode of theoretical understanding through the ready-to-hand mode of practical knowledge.

The one area that showed little change as a result of my pedagogical shift was students' learning of APA style. As noted above, this may be in part because for most students this format holds little relevance, as it not a common expectation across all of their courses, and its utility is only evident for those students anticipating an advanced degree. It is, in other words, a topic that holds little practical relevance for students: it is not part of their lived experience, and for most it never will be.

Perhaps learning by doing is only successful to the degree that the doing is made relevant to students' lives.

It is also worth noting that the motivation for the pedagogical changes described above came from the learning outcomes assessment, via two avenues. The first of these was portfolio assessment, in which students' capstone projects summarized their achievements as well as their remaining questions and concerns as they readied themselves for graduation. The second was the informal gathering of feedback via conversations with students during their final semesters at the university. Each of these practices was informed by the desire to assess students' learning in their own words.

Concluding Thoughts

In the preceding paragraphs I have tried to sketch out some key features of teaching and learning from my phenomenological perspective. Through specific examples I have explored the features of learning via experience, learning in relationship, and learning by doing. These features underscore the importance of education that embraces the lived experience of students and approaches teaching as an engaged - and engaging - activity. Teaching can be transformational to the extent that it aims to meet students where they are and remains mindful of the likelihood of misunderstanding on the way towards mutual understanding. Transformational learning may begin with anticipatory anxiety and expectations that will not be realized. Teaching therefore may require an ongoing invitation for students to tolerate anxiety, frustration, and even disappointment on the path to discovering something new. On the other side of the threshold of learning lies the potential for a new perspective that can overwrite anxiety and naïve expectations with a sense of competence and self-confidence.

The assessment of student learning, when undertaken qualitatively and relationally, can allow for thick description and phenomenological understanding of students' worlds in students' words.

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Phenomenology: Where Is It and What Is In It For Us?

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ABSTRACT

The new research interest in phenomenology brings with it the challenges it has faced in the past, especially phenomenology itself. This essay-styled paper is about the availability of phenomenology to education specialists. Phenomenology is approached here through a survey and then pursued as an approach to education. It does so by asking two questions: Where does phenomenology stand today and what does it bring to educators? Phenomenology as an activity is presented in an undistorted way, showing its availability, and is illustrated with examples of the thinking of important 20th century figures. The tools that phenomenology provides are explicated. The essay includes my own experiences of phenomenology as a musician-musicologist and concludes with a brief characterisation of education as a situation rather than a body of knowledge or a technique. It suggests, finally, that the most fruitful relationship between phenomenology and education would be a tool to orient and possibly change what defines the current situation.

Keywords: Phenomenology, Education, Method, Wicked problem, Skilful coping

1 INTRODUCTION

Phenomenology, I argue in this paper, has become its own barrier to entry: it is a word used by as many practitioners from as many disciplines as they can attach intuitive meaning to it to capture their purpose of the moment (Tymieniecka, 2002; Adams & van Manen, 2008; Berrios, 1989). The term has become an umbrella term for so many activities that it can in itself be an obstacle to grasping the core principles and unifying elements of the field (Berrios, 1989). Despite its widespread scholarly use, few situations and applications that are now called phenomenological are explained in phenomenological terms (Giorgi, 2008).

Most often, phenomenology is an academic shorthand for an enquiry or explanation that follows autoethnographic lines, develops a narrative from a first-person perspective, or defends subjectivity as an ineffable and inaccessible component

of a learning and teaching situation (Smith, 2022). In such cases, phenomenology, which has represented a radical departure in philosophy since the beginning of the 20th century, is left out. Those who use phenomenology as a term for such descriptive generalisations usually end up in the territory aptly described by John Dewey in his pragmatic account of learning (Dewey, 2022), or the ethnomethodologists in their frame- and interaction-based accounts of situations such as classrooms (Macbeth, 2010).

How did phenomenology, a prudent research programme with scrupulously delineated concerns, come to be a quickly abandoned starting point for an eclectic application of methods that owe little to phenomenology and contribute even less to it? Is it that phenomenology, as St Augustine said of time, is something everyone thinks they know until they are asked to explain it? (Augustine & Chadwick, 2008). Today, as Graham

Harman (2007) revisits phenomenology phenomenologically to address the impasse in the work of thinkers such as Gilles Deleuze, Alain Badiou and Slavoj Žižek, its new prominence and ambition make its sincere misjudgement in so many disciplines worthy of recognition, or at least exploration.

It may well be that phenomenology has been condemned to profound misunderstanding by its friends as well as its enemies. In today's context of philosophical, social and personal urgency, often highlighted by Deleuze, Badiou and Žižek, can phenomenology emerge in its appropriate dimension and fundamental radicality? This is the question that underlies my argument.

This essay is divided into two sections. The first half discusses how phenomenology is available to education professionals as a means of gaining a new perspective on their practices and framing them as a project, with a brief emic perspective of my own experience. It also outlines how phenomenology offers powerful tools for clarifying situations, worlds and projects. The second half focuses on the education sector as a whole and its stakeholders. I propose that the problematic nature of education in a particular society often results from a misalignment of stakeholders, leading to what is called a 'wicked problem' (see Tromp, 2018; Brown et al., 2010). The problem is 'wicked' because attempts to alleviate the problem between stakeholders only exacerbate it. Instead of addressing this problem through internal reforms, education experts and advocates should take on the task of managing and mitigating the misunderstandings between stakeholders. Thus, it may be beneficial for educators to engage in a proactive process of stakeholder management to create better conditions for themselves. The phenomenological tools should be made accessible by education professionals and

policy advocates to help stakeholders identify, evaluate and effectively use new forms of interpretation and action within their institutions, interests, mandates and key concerns. My own experiences of phenomenology as an educator bear reference here.

2 WHAT IS PHENOMENOLOGY?

Introductions, analyses or historical overviews of phenomenology have already been attempted (Moran, 2010; Sokolowski, 2000; Spiegelberg & Schuhmann, 1994). This essay therefore explores the role of education professionals and their practices, focusing on the use of phenomenology. Education professionals, like other professionals (medical, legal, engineering, etc.), have expertise in identifying and solving problems related to learning and knowledge management (Shariq, 1997). However, these professionals must also be able to justify their methods and techniques to students who wish to enter the education sector and who will be assessed through standards-based examinations and assessments (Anikin et al., 2021). The latter requires education professionals to consider the larger project of education, including its quality and relevance, as judged by stakeholders such as the state, private sector and civil society (Gunter & Fitzgerald, 2013; Popkewitz, 1996; Green, 1990).

It was my journey with phenomenology that shaped my experience as both a performing musician and an academic in the university context of South Africa in the 20th and 21st centuries. As a musician, it enabled me to engage with music in a meaningful and purposeful way. By experiencing music through a phenomenological approach, I was better able to appreciate the nuances and expressions of the music I was performing. In the academic context, my phenomenological perspective informed my understanding of the complex relationship between performing musicians

and their audiences. In paying attention to the experience of the person, rather than the more traditional approach of privileging the analysis of objects and their properties, I was able to develop a deeper and more meaningful insight into the objects, such as music, and their effects upon the audience.

Overall, phenomenology has had a significant influence on my understanding and appreciation of music, both as a performer and an academic. Its focus on the experience of the individual has enabled me to develop more intentional and meaningful relationships with both music and the people with whom I interact on a daily basis. But, as I discovered in my postgraduate teaching, as a phenomenon and an experience, a philosophical approach and a practice, it compelled further scrutiny.

At first glance, phenomenology seemed more like a series of archipelagos than a transferable line of tradition. On closer inspection, one finds that it is more like a vast and intricate network of tributaries and rivulets leading into the same ocean of common understanding.

2.1 Phenomenology's archipelagos: A crash course

When Edmund Husserl proposed a phenomenological programme that could give philosophy a different status (Husserl, 1982), he was opposing what he saw as an unviable encroachment on the basic understanding and availability of concepts by the human and biological sciences of his time. Husserl was less interested in erecting a wall around philosophy that would stand against the claims of psychology to explain thought, or evolutionary biology to explain the inherited dispositions of mind and behaviour, or culture and history to provide a complete context for the thoughts and ideas of each epoch, than in creating a way to entertain thought and experience without becoming entangled in the hidden obligations they entail. In short, for Husserl,

psychology, experimental psychology, evolutionary biology, explanatory historiography, no less than neuroscience, cognitive studies and artificial intelligence today, presuppose a certain metaphysics, which is also the condition for their acceptance and practical feasibility. Husserl's aim was to develop a way of conceiving of these specific metaphysics and regional ontologies not as theses to be put forward and subsequently discussed, but as the enduring and unavoidable costs that accompany any attempt to make human experience explicit in scientific or even semi epistemological terms, or to explain human action in a way that can be divided into evidence and explanation. He agreed that all these efforts, which are attempts to explain the 'human', 'social' and 'cultural' as objects of knowledge, have their practical uses in justifying activities such as managing an organisation, allocating social goods, designing learning and structuring experiences to avoid trauma or harm. It would be a mistake to imagine Husserl as a late-blooming romantic who opposed explanations and technologies applied to humans for their better management, self-management and normative intelligibility. Rather, he was a high modernist critic of what Michel Foucault and others have taught us to see as the 18th and 19th century tools through which Western societies controlled themselves to become governable and more predictable by understanding how people can be represented and how they can represent themselves. For readers equipped with knowledge of biopower, governmentality and other Foucauldian tools for assessing the costs of a self-representing society, Husserl's phenomenology appears less as an attempt to rescue philosophy from replacement by a multitude of positive sciences than as a progressive insight into the ways in which these positive sciences and other self-explanatory systems are entangled in their own metaphysical basis of liabilities and costs of the knowledge and representations they achieve. In other

words, Husserl philosophically ended the era of unproblematic representation initiated by René Descartes, developed by Immanuel Kant and universalised by Georg Wilhelm Friedrich Hegel by removing representation from a comprehensive account of the philosophical field and replacing it with the extremely modern, surprisingly radical functioning of the concept of intentionality (Sartre, 1970, p.4). It was Husserl's companion and admirer, Martin Heidegger, who stated that Husserl "brought the great tradition of Western philosophical thought to completion" (Dahlstrom, 1996, p. 95).

Those who bring about the end of a dominant era of thought are often plagued by the difficulty of describing that era because their ability to intervene depends directly on its weakening. While it may seem that the 19th century (and here we must include Émile Durkheim, Sigmund Freud and Ferdinand de Saussure) productively shifted the project of representation from the speculative and conjectural foundations of Descartes, Kant and Hegel to methods that made use of experimentation and the explanatory tools of the natural sciences, effectively naturalising representation as if it were a fact synonymous with chlorine, genes and uranium. It was Husserl's insight that this apparent consolidation was a sign that the metaphysical commitment of the philosophy of representation had been exhausted, and that what looked like the final emergence of science from a philosophical ocean was a desperate attempt to negotiate the various costs of being able to assert a universal naturalism as the metaphysical basis of a subtle, widespread and multidisciplinary application of the representational programme.

Husserl wanted to start philosophy afresh without the debts mentioned above by dissolving its relation to representation, for this meant not only abandoning human

science but also the legacies of Hegel, Kant and Descartes in abeyance - phenomenology thus has the property of being a constant beginning. Insofar as it expands as a programme, phenomenology must carry within it this property of constant new beginning. If this does not happen, the phenomenological field is quickly re-infused with representational thinking, which was the lifeblood in the 19th century, leading to a bizarre eclecticism that explains the way phenomenology is used as a component of various hybrids in the academy today. The phenomenological field is not so much a promising terrain of conquest and exploration as an elaborate and subtle quarantine system against the multiple forms of the return of representational thought.

Let us assume that it is true that phenomenology is more like an archipelago than a road between Husserl and our time. In this case, it is because of its constantly repeated call to begin anew the endeavour to go beyond representation. Martin Heidegger (Heidegger & Stambaugh, 1996), for example, has taken up and reshaped much of Husserl's work because he discovered its starting point in an ontology (Agbo, 2018) that was inaccessible to Husserl because the latter flirted with the Kantian transcendental project and the constructivism of Descartes. Heidegger's ontology is therefore also understood as a starting point immune to the epistemological legacies of the 19th century, which continued to haunt Husserl despite his heroic efforts to escape them. Looking at the second (Martin Heidegger), third (Jean-Paul Sartre) and fourth (Maurice Merleau-Ponty) archipelagos, it is clear that Sartre (Sartre & Moran, 2020), a reader of Heidegger alongside Hans-Georg Gadamer, chose a deliberate strategy, which proved quite offensive to Heidegger, to invoke the Cartesian *cogito* in the midst of phenomenological ontology in order to eviscerate it and show that it was and is always the site of emptiness, the form of

nothingness, rather than the foundation of the representational project. Merleau-Ponty, in turn, has conscientiously reconstructed the human sciences' argument about the structure of behaviour with his *Phenomenology of Perception* (Merleau-Ponty et al., 1996), which is rooted in the naturalistic assumptions of the human sciences about the mechanism of perception, thought and action at the heart of this reconstruction. Merleau-Ponty (1996) restarts phenomenology with the primacy of perception, destroying the claim of the human sciences to invoke the body, the organism as a naturalistic foundation. Starting from the obligatory phenomenological new beginning, he shows that the science of man is inherently ambiguous and an unstable mixture of transcendental and empirical metaphysics. It is safe to assert that the phenomenological new beginning that Husserl both exemplified and recommended is a way of identifying and liquidating the metaphysical commitment of representation in its naturalistic phase, leaving it floundering in a paradoxical rather than a grounded relation to itself.

2.2 Instruments made available by phenomenology

From these brief sketches of a productive way of looking at phenomenology in the mainstream of philosophical endeavour in Germany and France, it is clear that phenomenology has developed powerful tools to help discard inherited and habitual ways of thinking, in some cases even entire modern disciplines, that can be used to create free spaces or liberated zones from which research and action can begin anew, unencumbered by the constant inertia that pulls contemporary thinking back to the representational project or forward to the elaboration of new naturalistic foundations. Three projects for which phenomenology has been indispensable are those of Simone de Beauvoir (Beauvoir et al., 2012), who has

shown that women's struggles cannot become effective until they have formulated a new way of being and acting that is sufficiently detached from the metaphysical presuppositions of the patriarchal order and the dictates of prevailing common sense. Anyone who reads de Beauvoir today (and there should be more) will be struck by the extent to which her orientation towards women's goals is an orientation in a war of one metaphysics against another.

A second figure is Frantz Fanon (2021, 2008, 2007), who remains a mystery and continues to attract many exegetes from today's human-scientific, historicist and other neo-representational frameworks, as if elaborating the psychology or sociology of liberation. A clear reading of Fanon that acknowledges Sartre reveals Fanon as a lost practitioner of phenomenology, since he directs his attacks and recommendations not to criticism or moral denunciation, and certainly not to theories, but to the creation of an atmosphere in which the metaphysics of colonisers, invaders and occupiers no longer has oxygen.

A third oblique phenomenologist is the anti-psychiatrist Ronald David Laing (Laing, 1990) who, thanks to his insightful reading of Sartre, correctly recognised that the politics initiated in the 1960s was a politics of experience and not a politics of classes and institutions. Only a politics of experience could mobilise the resources of the political to question and point out possible alternatives that were consistently and oppressively produced by a politics that in the 20th century was increasingly focused on the humanities and their social engineering of self-representation.

Today, the question would be whether phenomenology, even once clearly recognised, has not contextually exhausted itself in the necessary struggle to find room to manoeuvre in a world increasingly saturated with the project of representation

finely sliced and pierced into the pores of 20th century society by the social engineering zeal of American possessive individualism, Soviet communism and German fascism. I argue for a perspective in which Foucault (Foucault & Ewald, 2003) and Deleuze (2017) have shown in different ways that our societies are not far from the era of social engineering that has produced so many of the strenuous new beginnings in the history of phenomenology. Moreover, the global order of the 1990s is little more than a very economic kind of social engineering offered to whole nations and regions to apply to themselves when their territory is opened up for global use.

An observer of philosophy during and after the 1980s would be amazed at the number of reclaims that occurred. Instead of a new dawn prepared by the new left, Western Marxism, a politics steeped in the diversification of identity and culture, and a reckoning with modernity through postmodernism, philosophy at this time saw the emergence of Richard Rorty's attempt (1980) to dissolve the hold of analysis and expand the task of philosophy to include Ludwig Wittgenstein alongside Heidegger and Jacques Derrida as companions of Dewey's pragmatism. Umberto Eco (1976), considered a major philosopher whose point of departure is the problems of culture and its modalities, increasingly drew on Charles Peirce's labyrinth of thought to challenge the dominant conception of meaning and its mechanisms derived from de Saussure's linguistics. Given that Rorty and Eco each revive key figures of pragmatism, it is not surprising that Robert Brandom (2001) revisits the analytic project of philosophy as an explanation based on Rorty's pragmatism, which he extends to include Hegel.

In a different philosophical orientation, Ernesto Laclau and Chantal Mouffe (Laclau & Mouffe, 2014), who call themselves post-Marxists, take on a new

reading of Antonio Gramsci as a tactician and an invocation of Jacques Lacan as an anti-fundamentalist to bring a position to the project of European struggles that can best be described as pragmatic. Žižek (2019) is widely known for invoking Hegel, who jokingly claimed to be trying to prove that he was a Lacanian (Hanlon & Žižek, 2001). The basis of Žižek's extensive research is the return to German idealism in terms that liberate them from representational thinking and the naturalism inherent in psychoanalysis (Žižek & Daly, 2013). These examples relating to pragmatism are not so much evidence that pragmatism is an unjustly neglected heritage, but rather a sign that contemporary thought no longer wants to be guided by critique and that it therefore aspires to move directly into philosophical opposition to the endeavours that have rightly called themselves critical and analytical since Descartes.

The revival of pragmatism suggests that contemporary thought is returning to the metaphysical liabilities and presuppositions that have dominated that thought for the last two centuries. In doing so, they are approaching the project, or at least a place, to which the project of phenomenology can return as a radical new beginning achieved through the abolition of presuppositions. That this phenomenology would look different from its predecessors is to be expected because of the discontinuity that the phenomenological project exhibits on its way from Husserl through Heidegger, Sartre and Merleau-Ponty to de Beauvoir, Fanon and Laing. The place where this new phenomenology emerged was the recent coming together of four otherwise very different thinkers under their self-chosen label of 'Speculative Realists' (Harman, 2010a). What united them was the follow-up to a book by Alain Badiou's student Quentin Meillassoux entitled *After Finitude* (Meillassoux, 2009), in which he sets out the central importance and problematics of what he calls

'correlationalism' in Western philosophy. Meillassoux's thesis enabled the identification of otherwise individually complex philosophers such as Deleuze, Žižek and his teacher Badiou as philosophers of relation. The group of speculative realists was then able to formulate philosophical projects that moved out of the shadow of these late 20th century giants towards a project of speculative realism rather than speculative idealism, culminating, in their view, in relationalism. A prominent representative of this group is Graham Harman (2010, 2007), who pioneered the translation of phenomenologists and reinterpreted Heidegger (Harman, 2007) to develop speculative realism in phenomenological terms, while promising that his anti-relationalism will restore the phenomenological project to the forefront of 21st century philosophy.

3 PHENOMENOLOGY AND EDUCATION

Before advocating or criticising phenomenology, let us consider the situation of educators. Since Aristotle, teaching has been considered the third impossible profession, along with healing and governing (Aristotle et al., 2009). What makes professions impossible is neither a lack of experience nor expertise, but the number and diversity of stakeholders (Horton et al., 2015) who depend on good governing, healing and teaching. Before recommending yet another tool to educators who already operate in an eclectic teaching and research environment and can never agree on a main approach or widely shared perspective, it is worth examining the expectations that educators and their students need to meet. It may well be that the constantly shifting affiliations in educational teaching and research are more a reaction to the permanent difficulties in aligning stakeholders (Gunter & Fitzgerald, 2013; Popkewitz, 1996; Green, 1990) than the result of a lack of access to the right

concepts with which educators can consolidate and represent their field.

Educators operate in an environment where civil society and the private and public sectors each believe they have the primary interest in ensuring the value, purpose and content of education. For politicians, it is the object of a manifesto promise, the corresponding policy and the accountable recipient of budgets. For civil society, it is the battleground and test bed for social justice, insofar as education prepares people for equal access to opportunities. For the private sector, education is an asset that turns employment into a career investment, and the quality and type of education is critical to the return on that investment. Based on this quick representation of stakeholders, the education sector must negotiate with three different forms of expectations from the three significant sectors of society and convince them to see the value of each other's perspective if the education process and content is not to be monopolised and shaped by the concerns of either civil society, the state or the market at any given time. The educator must therefore often advocate for his budget and for his necessary latitude and autonomy with stakeholders who are all end users of education but cannot agree that their mutual perspectives should be treated equally. Each of the stakeholders wants to get the maximum benefit from the funds or credibility they all grant to the educator, hoping to somehow minimise or bypass the other stakeholders because of the urgency of their concerns.

In the quest to 'live' phenomenology, much is demanded of the educator. In addition to the recalcitrant and exclusivist stakeholders, the educator must convince the expectant users in society to adopt a typical method so that the educational process is able to justify its approach, develop dimensions and indicators that are appropriate to it, and

work within the framework of a unified and measurable strategy and policy, at least for a given political or economic cycle.

If the educator insists on developing his strategy and unified approach for the sake of consistency and reliability of results, he will inevitably be accused by the three stakeholders of being introverted and failing to meet their expectations of a well-prepared graduate, resulting in endless and fruitless disputes, for example, between university teachers and employers in government, the market or civil society, who will each in their own way claim to be burdened with the costly and unnecessary retraining of already qualified individuals to meet the particular requirements of their sector (Mouton et al., 2012). They therefore call for the national knowledge base to be actively managed from early childhood development through schooling and university to work-integrated learning, lifelong learning, multiple active education pathways, Recognition of Prior Learning (RPL), continuing vocational education, reskilling and preparation for self-employment or entrepreneurship. In short, the demands on educators and the expansion of their responsibilities are constantly increasing as each education stakeholder encounters new problems in their field. Therefore, education has become far more of an impossible profession than Aristotle, an educator of a king, realised. Educators, who are professionals in that they perform their duties in the public interest while protecting the public from themselves and from harmful impostors, are coping with a 'wicked problem' (Tromp, 2018; Brown et al., 2010) that stems from the near impossibility of managing two of the processes of alignment of interest without exacerbating the remaining one. Could it be that educators, like abused partners, have a kind of Stockholm syndrome in which they see the problems of their dominant stakeholders as their very own problems, while being too attuned to those

stakeholders' demands and harsh on themselves for their inability to meet them?

3.1 Against phenomenology as a method

If the scenario above is indeed the situation and dilemma of educators, what can phenomenology offer educators to assist them in their predicament? It is certainly not the case that phenomenology is a method, for nothing in philosophy, when conscientiously examined rather than remotely scoured for seemingly useful tools, is merely a method. Phenomenology arose to complete a long cycle that began in early modern philosophy with Descartes and was perfected by Kant. It proposed methods to order experience, thought and action and make them more reliable and responsible. The attempt to revive a method by naturalising research, using models and analogies from biology, linguistics and economics to carry out such concrete investigations as psychology, interpretive cultural studies and sociology, has yielded little of the results promised in her various manifestos and critically refined in her constant polemics. Its static universe was evident to Husserl when he proposed a philosophy of the concept and a philosophy of experience on entirely new foundations that eschewed the transcendental foundation Kant provided to the generalised Cartesian project as well as the dogmatic naturalism that underlies the task of the human and social sciences, which are now gathering recruits through artificial intelligence (AI), neurological foundations and other contemporary mutations of biology, economics and linguistics. Hence, phenomenology works out what thought and experience can be when they are no longer mortgaged to a method. It would be unfortunate if educators took the challenging and in some respects feral path of phenomenology in the hope of finding a better method than in the many descendants of Descartes and Kant, or a stable and intuitive foundation for and within the human sciences that lies above or below the

culture wars that 'overgrow' them and the materialist metaphysics that is thought to underpin them (Harman, 2011). Phenomenology has been proposed to show that the era of methods and its goals, despite its scepticism and appreciation of critique, is in fact a modern form of dogmatism. The path of phenomenology leads from one skirmish to the next against this dogmatism, which always presents itself as critical, analytical and profoundly anti-dogmatic.

3.2 Adapting phenomenology

What, then, can phenomenology offer the educator who seeks not to demonstrate the possibility of education but to show that, despite its impossibilities, it can produce results capable of sustaining the loyalty of its agents? Hubert Dreyfuss (Dreyfus & Wrathall, 2008) was one of the most adept recent exponents of phenomenology in its 20th century form. He performed the balancing act of explaining phenomenology as an account of the disclosure of worlds using little more than the resources of what he called "skilful coping" (Dreyfus & Wrathall, 2014). In advocating for phenomenology, we should be no less ambitious than Dreyfuss and commend its unique stance and ongoing inner transformation to educators who, more than anyone else, are called to continually uncover new possibilities in the worlds imposed on them by their discordant stakeholders. Fulfilling this task in a fundamental sense may only be possible through phenomenology, and it may be a new form of creative professionalism that can be achieved in the 21st century. Educators must rely on their 'skilful coping' because they have little else and little prospect of anything more substantial in a situation where the demands on them, as well as the conditions of their legal and financial survival, depend on their recognising and expanding new scopes of action that only their participation in the worlds of their stakeholders can reveal to them.

In an increasingly globalised and interconnected world, it is essential for educators to develop innovative approaches to learning and teaching that promote critical thinking, interdisciplinary approaches and creativity. Phenomenology offers us such a perspective on the way we perceive and experience the world, as it emphasises the importance of individual subjective experiences rather than a blanket approach to learning. To illustrate, I focus finally here on how I have benefited from applying phenomenological approaches to educational growth from the perspective of a professional musician who is also a musicologist.

An educator all my life, I have found in phenomenology an invaluable tool for understanding the educational process. Through a phenomenological approach, individuals gain insights into their own experiences and the experiences of others. For example, through the experiences in my jazz improvisation class, I found that students had unique experiences in exploring their own creative process. They were able to better understand their own experiences and those of their classmates, as well as the creative process as a whole. This allowed my students to have a deeper understanding of their own creative process as well as the creative process of their classmates, which led to more meaningful educational experiences.

As a performing musician, who is an academic in a music department at a South African university, I faced, along with many others in the same boat, an interesting phenomenon in the 21st century. Music as an academic field is typically conceptual and analytical, rooted in Western styles and approaches, often at the expense of African-influenced forms. At the same time, many of us as performers engage with popular and local styles of music that have their own methods, approaches and aesthetic values. Balancing these two worlds, academic and

performing, can be a challenge, to put it mildly.

The experience of this 'in-between' of academic and performing is best understood through a phenomenological approach. Phenomenology has enabled me to look at the experience of the individual in this space as the primary interpretive guide. By looking at the experience of the performer/academic and recognising my actions in this 'in-between' of academic and performative, I have been able to better understand the process of engaging with this duality. I recognised the uniqueness of this experience on an individual basis and appreciated how the skills, techniques and approaches the performer has developed through academic studies, influence and shape the approaches we bring to performing and engaging with our music.

In terms of education, phenomenology can serve as a guide for teachers and learners alike. It offers educators a way to recognise and appreciate the unique experiences that each learner brings to the classroom and the value that lies in individual approaches. It places the emphasis on learners' experiences rather than the structures of the curriculum or established pedagogical frameworks. Similarly, it enables learners to reflect on their own involvement in the learning process and recognise the value of their perspectives and knowledge.

4 CONCLUSION

To conclude, my research endeavours show how phenomenology has influenced me in the field of music and highlight the potential of phenomenological approaches for pedagogical growth. Through my research and practice, I have found a way to merge the theoretical and practical aspects of music by engaging with it in an experiential and reflective way. I believe this can serve as an example to

educators on how to make teaching in general more dynamic and engaging by cultivating creativity and critical thinking, ultimately inspiring individuals and the class as a whole towards further growth and development.

Phenomenology thus has been many things since its first consistent proposal by Husserl. Yet each of these things can be understood by grasping the situation in which philosophers like Heidegger, Sartre and Merleau-Ponty found themselves, and in which they would have failed or been forced to ironically compromise with old doctrines, ideals and methods if they had not been able to orient themselves. The strength of phenomenology has enabled these philosophers to work out this orientation into a project. By applying their talent and resources to this project, they became the most reliable guideposts in those situations that almost destroyed them. In this sense, phenomenology should be prominent among the tools and instruments with which pedagogy negotiates its turbulent place in the world, not because it could alleviate or calm that turbulence or give it a better foundation or a higher standpoint, but because it could enable the turbulence itself to become productive.

As a movement in philosophy, phenomenology sought to go beyond the inherited conditioning of the past. In this way it challenged the doctrines of modern philosophy from Descartes to the early 20th century. I have argued that phenomenology is hardly understood as a method and still less as a critique, but provides a set of insights proposed as primary and provisional to all thought, perception and action, for which other philosophies and methods would then appear as obvious presuppositions and their kinds of metaphysics.

Despite the many systematists and gatekeepers around the main phenomenologists

since Husserl, I see the search for a definitive formulation of phenomenology as merely an indication of rent-seeking. I therefore argue for a situational use of phenomenology that can gradually enrich itself by forming a non-malignant circle with past phenomenological achievements.

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Lifelong Learning As A Pedagogical Place

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ABSTRACT

The dominant form of lifelong learning has relatively recently become a “pedagogy of the self” shaping a particular identity of a “learner” which may limit the flourishing of the individual in society. How did this come about? And what may be needed from educators towards the re-invention of a lifelong learning pedagogy that intentionally assists the flourishing of individuals? These questions, to me as an educator, rank highly as important educational challenges educators may all have come to know in one way or another in our teaching and learning situations today.

As it may be possible to recast lifelong learning into a critical pedagogy and to acknowledge a social dimension at the heart of its discourse, what is the best kind of contribution educators could be making in this regard?

As a university-based adult education lecturer, in this paper I reflect on the kind of lifelong learning I regard as emblematic of my teaching and learning arrangements. In particular, I seek to understand “critically and systematically” how I could contribute to the revised pedagogy of lifelong learning Hinchcliffe (2006) puts forward.

Drawing mainly on phenomenological insights from the work of van Manen to guide my critical self-reflection, one of the main matters for further consideration is finding a shared understanding among educators of lifelong learning as a pedagogical place, and what a future-focussed lifelong learning pedagogy might look like to inform educational success for all and in ways that are both personally and professionally meaningful to individuals.

Keywords: Lifelong learning, pedagogy, adult education, self-study, lived experience

INTRODUCTION

In education we now hear calls for ‘caring schools’, ‘caring teachers’, ‘caring curricula’, ‘caring pedagogies’, etc ‘Care’ becomes a critical term of a morally attuned professional language, expressing vocational commitments, and passing on the ‘tradition of service’ (Schervish et al, 1995). ... But if we want to understand how caring is actually experienced, then conceptual models and professional discourses are not always the best references. We may need to bypass

conceptual and cognitive models in favour of more literary and imaginary sources that stay attentive to ethical experience, (van Manen, 2000, p.316).

More than twenty years later as I take into account van Manen’s insights pertaining to ‘caring’ in educational spaces, and specifically with reference to recent UNESCO calls, my educator experience as a lifelong learner impels me to explore the interchange, of “caring” with “lifelong learning”, in the teaching and learning spaces I may be seeking to better understand and improve. A recent

UNESCO report presents a case for “a future-focused vision of education, which demands a major shift towards a culture of lifelong learning by 2050, (UNESCO, 2020, p.10). All over the world individuals are called upon to consider the importance of learning societies and to adopt a lifelong learning identity throughout their lives as an appropriate point of departure for addressing the urgent matters of our time. These challenges would include matters pertaining to our global climate emergency and societal inequality brought once more to the fore, clearly and aggressively, by the COVID-19 pandemic.

Broadly aligned to this new, and re-imagined, call for lifelong learning, another recent UNESCO report focuses on the transformative work on teachers as an important focal area of education landscapes world-wide, and it is especially interesting to note that every “teacher’s ‘life library’ is fundamental to their work” and teachers are also considered to be “agents of an education entangled with life, ” (UNESCO, 2021, p.90). Indeed, as an educator, what does my ‘life library’ look like at this point in time, and how has it assisted in shaping the kind of lifelong learning that may be required to address an educational entanglement of the lives the students I serve, intentionally to guide their educational flourishing?

However, Hincecliffe’s own observation is that there may be two main ways in which to understand lifelong learning presently: either as a particular application of the Deweyan concept of education as growth (1985) or taking into account the “dominance of the liberal market, allied to the effects of globalisation and the ensuing risks of uncertainty, lifelong learning turns out to be an extra layer in the commodification of labour,” (Hincecliffe, 2006, p. 96).

Furthermore, and specifically within a South African context, Black (2022) also highlights complexities

associated with dominant understandings of lifelong learning:

However, despite UNESCO’s attempted discursive stand through these reports against the onward march of globalisation and neoliberalist thinking, the take-up of lifelong learning has tended towards instrumentalism (Biesta 2006, 2013), with a focus on labour market return:

Lifelong learning discourses are currently the overarching educational and training policy discourses ... [i]n their more than 40 years of existence, most of these discourses have come to reflect our technocratic global conditions more and more, emphasizing the pursuit of self-interest as freedom and objectifying most people into the assets of the few (Friedrich and Lee 2011, p. 154).

Post-democratic South African education policy has not escaped these transnational forces and trends, including the global discourse of lifelong learning, (Black, 2022, p. 676).

My exploration in this paper is therefore further informed by my sense that my educator lifelong learning ‘life library’ may need to be more adequately future-focussed in both my personal and professional domains, inclusive of ‘informative’ and ‘transformative’ innovation (Dede & Richards, 2020, p. 79) that may bring into view the kind of lifelong learning teachers and students now and in the future may need in their teaching and learning arrangements to address the societal challenges of our time.

THEORETICAL FRAMEWORK: SITUATING VAN MANEN’S PHENOMENOLOGICAL INSIGHTS

In doing phenomenological research, through the reflective methods of writing, the aim is not to create technical intellectual tools or

prescriptive models for telling us what to do or how to do something. Rather, a phenomenology of practice aims to open up possibilities for creating formative relations between being and acting, between who we are and how we act, between thoughtfulness and tact, (van Manen, 2007, p.13).

It is noteworthy that phenomenology is not considered to be only a qualitative research method but it is also considered to be a philosophy. Furthermore, there may be “as many styles of phenomenology as there are phenomenologists,” (Dowling, 2007, p. 131). In this regard Dowling goes on to clarify that “the many perspectives of phenomenology locates its various forms in the positivist (Husserl), postpositivist (Merleau-Ponty), interpretivist (Heidegger) and constructivist (Gadamer) paradigms (Racher and Robinson, 2003),” (Dowling, 2007, p. 131).

Although there is scholarly debate regarding whether the phenomenologist Max van Manen’s work is to be categorised as new phenomenology, he “has contemporary popularity among not only nurses but also medical practitioners (Mak and Elwyn, 2003) and physical educationalists (Goodwin et al., 2004),” (Dowling, 2007, p. 138). It is further noted that his “phenomenology is commonly used in conjunction with other contemporary influences in nursing phenomenological research studies,” (Dowling, 2007, p. 138).

I have chosen aspects of van Manen’s phenomenological approach for my lifelong learning educator self-study and have accordingly been guided by some of his insights as a useful way in which to approach and structure my exploration in this paper.

In particular, I am drawn to his work that emphasises phenomenological research as the study of lived experience (van Manen, 1997, p.9). Here, gaining a “deeper understanding of the nature of meaning of our everyday experiences” (ibid) is a primary aim of phenomenology.

Also, “phenomenology does not offer us the possibility of effective theory with which we can now explain and/or control the world, but rather it offers us the possibility of plausible insights that bring us in more direct contact with the world,” (ibid).

I am also persuaded by van Manen’s insights that the practice of phenomenology is the “attentive practice of thoughtfulness”, (van Manen, 1997, p.12), this is to say as, “... educators we must act responsibly and responsively in all our relations with children, with youth, or with those to whom we stand in a pedagogical relationship,” (ibid).

Finally, I am drawn to van Manen’s view that to “to reject the standard of rationality would mean that one assumes that there is no basis upon which human beings can come to common understandings,” (van Manen, 1997, p.16), and instead there may be value in working towards “a broadened notion of rationality,” (ibid).

MY PHENOMENOLOGICAL SELF-STUDY ON LIFELONG LEARNING

Phenomenological method, in particular, is challenging, because it can be argued that its method of inquiry constantly has to be invented anew and cannot be reduced to a general set of strategies or research techniques. Methodologically speaking, every notion has to be examined in terms of its assumptions, even the idea of method itself, (van Manen, 2006, p.720).

Phenomenology is not the study of how or why people attribute their meanings to texts. ... The problem of phenomenology is not how to get from text to meaning, but how to get from meaning to text, (van Manen, 2017, p.2)

Embarking on a phenomenological self-study, I note the “complex link between what we experience and who we

are,” (Čapek & Loidolt, 2021, p. 223). I also agree that although “... there is no set methodology for how a first-person account should be conducted and presented,” (Levinsson, Norlund, & Beach, 2020, p. 10) my self-study’s descriptions of my lived experienced “need to be carefully crafted to bring forth a deeper understanding of the phenomenon,” (ibid).

Specifically in terms of my method, I set out to learn how my lived experience could play a role in shaping my self-understanding and my work as a researcher/educator (Chapman, 2012, p. 82) and my data set includes my writing and reflections contained in my teaching portfolio, a recent institutional reflective report, and reflections on a particular lesson in an undergraduate classroom setting. Finally, I use my own writing as a basis for critical reflection and future-focussed possibilities, noting that Van Manen’s protocol writing “offers potential as a research tool in a myriad situations where conventional data collection techniques are impractical or unavailable,” (Fortune, 2009, p. 1).

For insight into my own teaching philosophies and practices, I have chosen to self-study my own educator and mature student understandings of lifelong learning, casting light on certain kinds of lifelong learning I have embraced for many decades, and keenly so, as an agent of education ‘*entangled with life*’ (UNESCO, 2021, p.90) in so many different ways.

Through a phenomenological lens as an educator I explore my lived experience noting that “... for us the theoretical practice of phenomenological research stands in the service of the mundane practice of pedagogy: it is a ministering of thoughtfulness,” (van Manen, 1997, p.12). Foran and Olson’s observations are also relevant and noteworthy pertaining to orienting “our practices pedagogically and our research phenomenologically” to make possible a

challenging of “entrenched, taken-for-granted conceptions in formal education,” (Foran & Olson, 2008, p. 25).

But what kind of phenomenological lens should I use? While it is noted that the reason for re-imagining lifelong learning is not singularly linked to market imperatives and neither to its emancipatory potential (Hinchecliffe, 2006, p. 97), a more important consideration may be that embracing a pedagogy for lifelong learning may have different requirements:

If we think about the nature of various pedagogies for a moment – Rousseauian, Deweyan or pedagogies of cognitive development – then these may be seen as vehicles through which learning happens. But the pedagogy of lifelong learning is subtly different from all of these. For in embracing the concept of lifelong learning one also embraces a whole pedagogy: one cannot have a lifelong learner without bringing in the associated features of the reflective learner, teaching through facilitation, the emphasis on the transferability of learning and the importance of self-direction and self-management. One cannot be a lifelong learner unless one absorbs a whole discourse of pedagogy. To become a lifelong learner is to learn a pedagogy. Pedagogy isn’t simply the means whereby a curriculum is delivered: a person has to live a whole ideology so that one must “acquire the self-image of a lifelong learner” (Knapper and Cropley, p. 49). This auto-pedagogy (a pedagogy of the self, a pedagogy of coping) is, then, the distinguishing feature of what currently passes for lifelong learning. (Hinchecliffe, 2006, p. 97).

A storied account of my own educator identity might foreground the way

in which I have understood and practised ‘problem-posing’ rather than ‘banking’ education (Freire, 1972, p. 52) in my teaching. Reflecting in this way, my educator ‘life library’ would bear testimony to the numerous ways in which I have tried to ensure that societal challenges of the day are the matters to be addressed within my classroom, and that certain societal challenges were unambiguously evident within my curricular content. In this regard, I think of the ways in which Cape Town’s water crisis has been used as a lifelong learning topic for problem-posing and solving (Walters, 2018, p. 146) as well as in my own teaching and learning situations.

If the UNESCO call is indeed for educators to be “*agents of an education tangled with life*” then it is important to consider what this kind of life may denote for the kind of lifelong learning that is being globally espoused. In my neck of the woods, if I were to author my own account of being an agent educator, I would emphasise the nature and number of intergenerational lessons life offers as foundational to teaching, and my attempts to garner the experiences of students as part of problem-posing curricular activity. For example, and with reference to Cape Town’s recent water crisis, my ‘*life library*’ a few years ago became an appreciably more relevant part of my lifelong learning pedagogy when I was challenged by a student who wanted to know why so much attention was being paid to Cape Town’s water crisis at that point time, that is to say, only when the local and national newspapers carried information about it on a daily basis, and not before then when scores of Capetonians walk and pay for water on daily basis. I remember saying to the student that there is nothing I could take away from the

A storied account of my own identity as a university-based adult education lecturer might also reflect on the ways in which universities may understand

observations made but there is now an opportunity to redress the challenges Capetonians face and to find common ways of addressing the water crisis. As an educator, this was a significant intergenerational problem-posing moment.

Without giving up my expert and authoritative role in the teaching and learning situation, it was important to me that students could see that my learning from them is also a necessary part of a useful teaching and learning situation. In the example provided, the ethos informed by this kind of ‘*education tangled with life*’ meant in some way that my lifelong learning educator identity for the most part might always need to be a narrative-in-the-making and especially if future-focussed matters are to rank highly in terms of student engagement.

From a phenomenological point of view, the qualitative researcher is inevitably also an author. Writing is not just reporting the research findings. Writing is the very act of reflective inquiry and of discovery. (van Manen, 2010, p. 4)

Teachers are asked to rewrite their anecdotes, but now from the point of view of an imaginary student in their class. ... The effect of rewriting, and fictionalizing from an imagined student point of view, has a dramatic effect. It is as if this rewritten text creates a space for a new understanding of the original account. We may now discuss how the pedagogical task of teaching involves knowing the importance of “being there” or “availability” for students when it matters. (van Manen & Li, February 2002, p. 9)

its lifelong learning role as part of its mission and vision; beyond the strategic promotion of flexibility of provision of programmes and courses, what does it mean to for me to be a lifelong learner at a

university today? And what does it say when most university students may not regard themselves as lifelong learners; a term more commonly ascribed only to part-time students and adult education classes? What does it say when lifelong learning and lifelong learners may be more of an administrative construct than an academic construct in higher education landscapes currently?

LIFELONG LEARNING AS CRITICAL PEDAGOGY

Curriculum renewal continues to be an important focus of the academic project in the Faculty, given the imperative to respond to the changing nature of the schooling system, professional practice of teachers and technological advances in education. There is an urgent need for concrete change in curricula to reflect attributes such as scholarship, critical citizenship, lifelong learning, creative thinking, academic literacy and self-directed learning, (Lawack, 2021, p.63).

Revisiting my own teaching portfolio for the purposes of this paper's current exploration into lifelong learning as critical pedagogy, I had written down the following reflections as of 16 January 2020 regarding my teaching experiences in my adult education classes both at undergraduate and postgraduate levels:

What are my teaching beliefs?

For the increasingly diverse student groups who currently enrol for our adult learning qualifications and courses, already I have a sense I could do more in placing a transitioning and somewhat hybridized adult learning student identity at the centre of my considerations when drawing on learning theories to guide my teaching. Striving, therefore, to provide the students within my charge with the best possible educational experiences is the key

motivator for reflecting on how I teach currently and refining what ought to be informing my teaching beyond what I already bring. Learning about the self as teacher can also be a complex emotional exploration (Fitzpatrick & Spiller, 2010) and the emotional complexities at play as part of my own learning journey appear to be influencing my thinking and my attempts at developing my teaching portfolio mainly along the following lines, as encapsulated by these questions:

Do my teaching beliefs demonstrably inform my teaching practices?

In which ways are my teaching beliefs and practices interesting and useful research areas?

How do I understand my field, and changes within my field, within the context of a transitioning higher education ecology?

Informed by the work of Freire?

As insightful and as attractive as the next excerpt may at first appear to be, what does it really mean for me as a teacher in a higher education setting decades away from the experiences that might have influenced Freire's philosophy of teaching at the time?

"Whoever teaches learns in the act of teaching, and whoever learns teaches in the act of learning." (Freire, 2001, p. 31).

I appreciate these insights, and in a sense my teaching philosophy is informed by the work of scholars, such as Freire, who emphasise the importance of educators, acknowledging that teaching is a human act, that all students need to be respected, and that the knowledge and resources that all students possess in varying ways should be drawn on in order to make learning as meaningful and as respectful as possible to all involved in the teaching and learning situation.

A lifelong learning philosophy?

What do I mean by specifically foregrounding lifelong learning as the learning principle informing my teaching?

And why might the ethos of lifelong learning best inform my approach to flexible provision?

I would like to state at the outset that I understand lifelong learning to be a contested term within and beyond higher education contexts, as well as within our own institution, where it may not be entirely clear what we understand as a “working definition” of lifelong learning institutionally. The widespread contested nature of lifelong learning as a construct for meaningful human development is worth considering, and it is also important for me to say in which paradigm I might be locating myself: through my personal beliefs and my teaching, do I promote a social justice perspective of lifelong learning, or a neoliberal view of lifelong, and in reality is it really that unproblematic perceive these belief systems as a dichotomy?

At the level of our institution, I believe that it is entirely possible to re-imagine the ethos of lifelong learning with the view to learning what kind of educational provision would best serve each and every student on our campus. In other words, what is institutionally emblematic about lifelong learning on our campus, and what may be aspirationally inscribed into the new student mosaic connecting formerly ‘traditional’ and ‘nontraditional’ students for the first time as UWC’s lifelong learning students, as opposed to lifelong learners?

In one sense the notion of flexible provision of teaching and learning may rank among the most evident forms of

lifelong learning for all students at the university, and not merely for students commonly perceived to be adult learners or part-time students.

In other sense, a lifelong learning ethos at our university may serve to promote scholarly engagement and critical enquiry in areas that may not be commonly associated with undergraduate teaching and learning. For example, I would like to find ways of encouraging some of the students I teach to consider writing for undergraduate student journals by themselves and with their peers. So what form of lifelong learning would I be promoting as an individual in society and also as a teacher at a university? In my view, lifelong learning is an orientation that makes possible creative and inclusive kinds of learning for many kinds of people, in formal and informal spaces, and particularly for people for whom formal learning may not have been intended. Lifelong learning institutionally is so much more than scheduling classes after-hours for students who happen to be working and studying at the same time. It is an orientation that should be geared towards the educational success of every student at the university.

Both as an adult education student and educator, I have longstanding scholarly attachment to the work of Peter Jarvis, internationally known for his book *Lifelong Learning and the Learning Society* as well as for his chief editorship for several years of the *International Journal of Lifelong Long Education*. Particularly as a university-based lecturer in adult education I have felt supported by his clear and insightful contributions within the ambit of lifelong learning.

With reference to his sharing as an adult educator, in the excerpt below, had Jarvis invited me to write down a lifelong learning experience of my own, it would have been along the following lines: this creative assignment would have taken me back to my own professional space at the university in the mid-2000s and specifically to our staff’s bulletin board where, already as part of the furniture, there was an old lifelong learning leaflet pinned down in the top righthand corner of the board, with the

heading: *A Working Definition of Lifelong Learning*, for all to see.

As an adult educator I had a number of experiences in the early 1980s that sparked off my interest in learning, but the one which actually began my research was unintentional. I was invited to speak at an adult education workshop about the relationship between teaching and learning. In those days, that was a most insightful topic to choose since most of the books about teaching rarely mentioned learning and most of the texts about learning rarely mentioned teaching. I decided that the best way for me to tackle the topic was to get the participants to generate their own data, and so at the start of the workshop each participant was asked to write down a learning experience. (Jarvis, 2009, p. 22).

I remember mostly informal collegial conversations with reference to this “working definition” of lifelong learning, and wondered about lifelong learning being an “ethos” and an “approach” towards ensuring the educational success for all students. I also remember feeling that I was possibly part of a very small group of lecturers on our campus who might intentionally consider lifelong learning as part of their professional identity. Even though lifelong learning featured prominently in our University’s mission statement and graduate attributes, there didn’t seem to be anything emblematic about it for staff and students, beyond the espoused flexible provision of programmes and courses, to make it the lifeblood of the university. On one teaching occasion, I also remember asking of my undergraduate adult education classes whether or not they considered themselves to be lifelong learners. While an appreciable number replied that they did, more preferred to be called students, as

lifelong learners in their view seemed to connote a kind of student who was just starting out at the university and who was not a ‘proper student’ yet.

Therefore, the lifelong learning experience that stands out for me is having a past picture of myself feeling uncertain and somewhat surprised that unexpectedly few teaching staff and students might positively identify themselves as lifelong learners even they may readily agree to be part of lifelong learning as a daily occurrence. This makes realise that they may need to be more frequent and explicit connections in my teaching regarding the University’s portrayal of lifelong learning, and as frequent opportunities for critical reflection particularly where lifelong learning frames certain graduate attributes of the University.

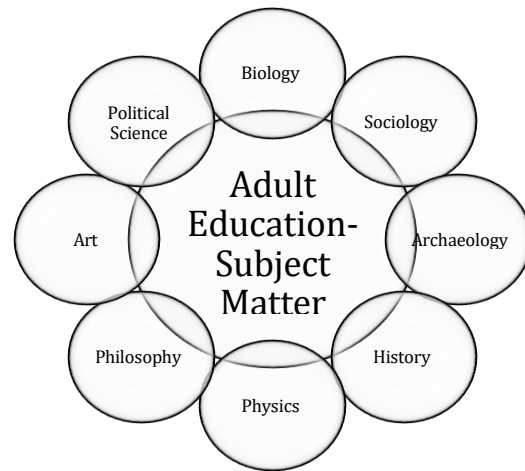
“One cannot be a lifelong learner unless one absorbs a whole discourse of pedagogy. To become a lifelong learner is to learn a pedagogy. Pedagogy isn’t simply the means whereby a curriculum is delivered: a person has to live a whole ideology so that one must “acquire the self-image of a lifelong learner” (Knapper and Cropley, p. 49). This auto-pedagogy (a pedagogy of the self, a pedagogy of coping) is, then, the distinguishing feature of what currently passes for lifelong learning,” (Hinchecliffe, 2006, p. 97).

When lifelong learning is in danger of becoming so broadly interpreted so as to lose its currency, the problems posed by Hinchecliffe take on a significance and urgency for educators to address:

I now wish to consider how the pedagogy of lifelong learning can be further strengthened in respect of its “domain” – practical knowledge. What conditions are needed so that this knowledge itself

is constantly problematised? This is clearly required if the pedagogy is to successfully address the phenomena of risk and change. I want to suggest that the conditions which bring into being the problematisation of knowledge are also those which will help (but not guarantee) convergence amongst participants in situations with respect to situational understanding. The aim, then, is to recast lifelong learning as a critical pedagogy – a pedagogy that acknowledges a social dimension at the heart of its discourse and that is more than a set of prescriptions directed at discrete bearers of labour commodity. (Hinchcliffe, 2006, pp. 105-106). And it would seem that, from my view as an educator, lifelong learning as problem-posing with the view to societal healing may have a place as part of the envisaged ethos and framework of lifelong learning as critical pedagogy. There is another matter warranting much discussion for me as a university-based adult educator. That is to say, is adult education a discipline or field of study, or both, and why should this matter?

In addition to being a professor of philosophy, Stanage is also known for his work *Adult Education and the Phenomenology of Research* (1987), and in his view adult education research should ideally be driven by the following four questions: *Who am I? What can I know? What ought I to do? And what may I hope?*



Central to his thesis is that when adult education of person is the subject matter then phenomenological investigation is an appropriate if not the most appropriate approach to research and analysis. If we consider that quantitative and qualitative findings are a form of education to both the researcher and those who consume this research, it is therefore easy to see how person is a part of all sciences in one form or another. (Zacharakis, 2014, p. 617).

Drawing on Stanage, Zacharakis (2014) also aligns himself to the view that adult education, whether a discipline in its own right or a field of study, necessarily touches on every subject matter affecting the lives of adults. This would suggest that, for lifelong learning to be recast as a critical pedagogy successfully, conversations across various subject matters would need to inform its critical pedagogical ethos.

It is noted from Willis (2001) that the “...outcomes of phenomenological reflection, like that of any other inquiry, are thoughts, discourses and written texts”. Accordingly, I was engaged in phenomenological reflection in which I attempted to engage with the lived-experience, and experiences which in turn

have been critically reflected upon. (Willis, April 2001, p. 5).

With the benefit of hindsight, it would serve educators well if our self-review portfolios ideally remained living documents through which our critical reflection could inform our pedagogy, and to work towards building a culture of dialogue around the key matters raised in them. More importantly, it seems necessary for interdisciplinary dialogue to be a regular feature of healthy teaching and learning arrangements, in order for our “life libraries” to be usefully stocked for our future-focussed challenges in education and our world.

AFRICAN PHENOMENOLOGY, MY EDUCATOR “LIFE LIBRARY” AND LIFELONG LEARNING

To speak of an African phenomenology in contemporary African society is to theorise about human dispositions toward their realities and how the understanding of their lived experiences can promote a better awareness of their challenges and aid a meaningful response to these challenges, (Sanni, 2021, p. 2).

My educator “life library” continues to address personally complex matters such as: which Africa? whose centre? And: does Afrocentricity provide a meaningful synthesis? (Lebakeng, 2021, pp. 156-157). I also reflect on how Africanity may provide a core agency for addressing the challenges faced in African societies (Lebakeng, 2021, pp. 140-144).

For the purposes of my self -study, I note that African philosophical responses to everyday realities, according to Sanni (2021, p.3) could be divided historically into three main schools or traditions, and he draws on the following scholarly sources in each case in support of this assertion: universalism (Hountondji, 1973), particularism (Gyekye, 1995; Wiredu,

1997), and eclecticism (Kanu, 2013). However, and by using of the Cameroon as a case in point to highlight appreciable complexity evident in the African philosophical stances just mentioned, Sanni argues that it is also necessary to continue searching for phenomenological approaches that optimally bring into view and address the realities and lived experiences of those who live on the African continent:

The task of African phenomenology therefore is to let the situation speak through an effective investigation and engagement with the context. The real burden of African philosophy is the noise that distracts and blocks the ability to listen to our context without presuppositions, an agenda or an audience that risk an accurate engagement with our context, (Sanni, 2021, p. 5).

It would seem an important opportunity is being presented to explore Sanni’s assertions in relation to the UNESCO call for building meaningful learning societies and lifelong learning identities. Particularly so for me as an educator in search of authentic forms of lifelong learning for our continent, and even more so if lived experiences have currency as part of innovative and inclusive curricular content.

South Africa exhibits shockingly low education attainment by any measure: less than half who undertake the final National Senior Certificate (the school leaving/exit qualification) qualify to move on to tertiary education (M&G 2020). The vast majority of students who fail are poor, and youth unemployment levels are soaring (Stats SA 2020), while the government doubles down on supply side labour market

interventions despite a deindustrialised formal economy that exhibits low job growth (Vally and Motala 2014; Allais 2020). And yet, the platitudes of “work hard to make it” and “become a lifelong learner to get a dream job” are ubiquitous in South Africa, (Black, 2022, p. 678).

However, scholars such as Nafukho (2020) continue to believe in social imperative of lifelong learning and the potential it has to increase citizen participation:

In the African context, lifelong learning is also a driver of political stability and social inclusion. It is a powerful way to promote democracy and protect against political instability.

It is noteworthy Nafukho also believes that universities in Africa are endowed with the “the human, technological and financial resources necessary to promote and sustain lifelong learning,” (ibid).

CONCLUSION

Fundamentally, it is the person who learns and it is the changed person who is the outcome of the learning although that changed person may cause several different social outcomes. (Jarvis, 2009, p. 24).

Understanding how to make lifelong learning thought of as a pedagogical place might indeed make me a changed educator, and perhaps the undertaking might also entail piecing insights of lifelong mosaics together, one at a time, and to achieve the kind of lifelong learning that could usefully contribute towards UNESCO’s globally espoused learning cities and learning regions.

Furthermore, if problem-posing education is meant to be usefully

understood as ‘revolutionary futurity’ and if the point of departure must always be with us ‘here and now’ (Freire, 1972, p. 57), then it would be important to know what kind of lifelong learning most appropriately assumes a pedagogical place for us and educators and the students we serve. And fittingly so in the words of Sanni (2021,p.3) we may have a lifelong learning obligation to give ourselves on the African continent the best possible “present and ... desired future.”

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Integration of The M In STEM Curricular Units Among Pre-Service Teachers Through A Phenomenological Approach

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ABSTRACT

Regardless of policymakers and educationists continuously hailing the importance of science, technology, engineering, and mathematics (STEM) and its correlation with developing countries' economic prosperity, all stakeholders have lamented poor mathematics participation in STEM fields. The need to conduct the current research has thus arisen. This is because K-12, or school mathematics (STEM), continuously attracts relatively tiny groups of culturally and linguistically different learners who are persistently involved in almost every human endeavor. Rested upon both the disproportionate representation and configuration of mathematics and coupled with the contestations, the current study examines an alternative approach to mathematics learning together with experiences associated with STEM participation. Consequently, this phenomenological investigation aims to explore and describe the lived experiences related to improving the integration of mathematics in STEM curricular units among pre-service teachers. Data was collected from six (6) STEM pre-service teachers until data saturation was reached. The data collection process was carried out through in-depth semi-structured interviews and analysed through a thematic approach in the search for dominant themes. The findings and thus the question from previous studies, what does integration of STEM and mathematics really mean would require mathematics practices through the integration of STEM right through elementary classrooms, using model-eliciting activities as well as responsive, professional development for mathematics teachers. The consensus is to make explicit connections between science, engineering, and technology while maintaining a relationship with mathematics and engaging context through instruction. Keenly, such an approach also bridges the gap between secondary and higher STEM education, facilitating the process of designing integrated STEM learning, which ought to be anchored on experiential or evidence-based models.

Keywords Career, cognition, narrative research, mathematics integration, phenomenology, STEM.

1 INTRODUCTION

Several concerns regarding the state of school mathematics (M) and science, technology, engineering, and mathematics (STEM) education as a collective in South Africa have consistently been raised (Graven, 2014, 2015; Macrae, 1994; Pausigere & Graven, 2014, Robertson,

Graven, 2015). For example, Graven (2014) highlighted the link between poverty, inequality, and school mathematics performance in South Africa's post-apartheid context. A decade before Graven (2014), Macrae (1994) lamented the legacy of apartheid on mathematics education in South Africa, particularly among African or Black students. Such

worrying opinions warranted Pausigere and Graven (2014) to suggest that learning metaphors and learning stories of learners and teachers in the numeracy community of practice could improve the predicament of South African school mathematics education. Collectively, what could be ascertained from the previous studies, as Robertson and Graven (2015) articulate, is to explore South African mathematics learners' experiences.

Additionally, more established research is needed to unpack pre-service teachers' conceptions of STEM education, the integration of school mathematics in STEM units, and student achievement gains among pre-service teachers. Unpacking and resolving such unknowns will seek to shed more light on the link between poverty, inequality, and mathematics performance in South Africa's post-apartheid context. In response, the current study investigates the integration of the M in STEM curricular units among pre-service teachers.

Beyond South Africa, different perspectives and through quasi-experiment in the past, too, Childress (1996) already started asking whether integrating technology, science, and mathematics improves technological problem-solving. More than 20 years later, such a question led Crotty Guzey, Roehrig, Glancy, Ring-Whalen, and Moore (2017) to interrogate the approaches to integrating engineering in STEM units and student achievement gains. On the other hand, Cunningham and Carlsen (2014) investigated teaching engineering practices and beliefs associated with understanding the challenges linked to physical science teachers integrating engineering and physics. Similarly, Rinke, Gladstone-Brown, Kinlaw, and Cappiello (2016) alluded that it is equally important to understand how teachers' conceptions of integrated STEM education are reflected in curriculum writing. While

relatively new research, the inference from Childress (1996), Crotty et al. (2017), Carlsen (2014), and Dare, Ellis, and Roehrig (2014, 2018) regarding the integration of the Mathematics in STEM curricular units suggest growing traction. For example, in 2001, the United States National Science Foundation (NSF) introduced STEM. The discipline STEM was fundamentally referred "to the career fields which require knowledge and skills to be integrated into their field..." with the motive being integral or better fit "... with the learning style of ... students..." (Azman & Maat, 2019, p. 965). What is also known is that STEM education has often been considered a meta-discipline, meaning the "creation of a discipline based on the integration of other disciplinary knowledge into a new 'whole.' This interdisciplinary bridging among discrete disciplines is now treated as an entity known as STEM" (Morrison, 2006, p. 23). The previous studies have also provided a relative basis for understanding various architecture and configurations of STEM, improving STEM participation (Azman & Maat, 2019; Crotty et al., 2017). For instance, Azman and Maat (2019) recently conducted a systematic review of teachers' perceptions and challenges towards STEM integrations. While there are several questions unanswered, one critical insight was the proposal regarding re-examining the state of mathematics representation and, thus, integration in STEM (Azman & Maat, 2019; Crotty et al., 2017; Roehrig, Wang, Moore & Park, 2012). One motive for such has, in part, been due to the work of Roehrig et al. (2012). A decade ago, Roehrig et al. (2012, p. 7) questioned the need for "... adding the E..." in examining the influence of K-12 engineering standards on the implementation of STEM. In addition, Crotty et al. (2017) recently reviewed the approaches to integrating engineering in STEM units and student achievement gains. The conclusion is

that regardless of policymakers, researchers, and educationists continuously hailing the importance of STEM and its correlation with developing countries' economic prosperity, all stakeholders alike have lamented over poor mathematics representation and, thus, participation in STEM. In response, various ongoing studies have used qualitative approaches in examining the relative influence of STEM on learning and teaching. Fundamentally, most research so far used methods including but not limited to ethnographies, case studies, and sometimes autobiographies, which form the narrative research. Disappointedly, researchers have noted that mathematics has received little to no interrogation through a phenomenological approach (Roehrig et al., 2012). The limited attention is particularly true when examining the phenomenon of mathematics learning together with experiences associated with STEM participation. The need to add to a rich repository of knowledge on STEM has thus arisen because mathematics continuously attracts relatively tiny groups of culturally and linguistically different learners and hence the current research.

2 BACKGROUND

Mathematics remains the most underrepresented in STEM disciplines (National Academies of Sciences, Engineering, and Medicine, 2018). However, it has been argued that mathematics learners are persistently involved in almost every human endeavour (De Meester, De Cock, Langie & Dehaene, 2021; National Academies of Sciences, Engineering & Medicine, 2018). Rested upon the ongoing underrepresentation and exacerbated by the growing need, particularly in the fourth industrial revolution technologies, the current study examines alternative approaches for mathematics learning and experiences associated with STEM participation. Understanding pre-service teachers' experiences and mathematics

integration in STEM and non-STEM fields is likely to improve mathematics participation and, therefore, STEM, improving academic performance and promoting STEM and non-STEM participation. Accordingly, this phenomenological study aims to concurrently explore and describe the lived experiences of pre-service teachers and their views of integrating mathematics in STEM curricular units. Faced with such contestations, the current background, and thus theoretical framework, for the most part, are built on the work of De Meester et al. (2020) via the examination of how to bridge the gap in various levels of STEM disciplinary knowledge, such as but not limited to secondary school right through to higher education institutions. De Meester, Knipprath, Thielemans, De Cock, Langie, and Dehaene's (2015) position of integrated STEM also served as a focal point to examine De Meester, De Cock, Langie, and Dehaene's (2021) view on integrated STEM curriculum units. The work of De Meester et al. (2021) subsequently provided a foundation to examine challenges faced by STEM teachers when confronted with the notion of integration, which consequently paved the way to interrogate implementations of STEM curricular units through a phenomenological approach. To fully address the research objectives, an additional focal point was the need to explore the methods of integrating Mathematics into STEM curriculum units through a phenomenological stance. While not an exhaustive list, the current research developed on work such as but not limited to affordances and constraints of STEM integration for science and mathematics (Rinke et al., 2016) and discipline-based interpretation through computational modeling and building cognition (Chandrasekharan & Nersessian, 2015; Farris, Dickes & Sengupta, 2016). Other grounds for evaluation included Dickes, Sengupta, Farris, and Basu's (2016) view on the development of mechanical reasoning, as well as Nersessian's (2012) and Sengupta,

Dickes, and Farris's (2018) position on modeling practices for conceptual innovation through ethnographic study, which also laid the background for the shift toward a phenomenology of computational reasoning in STEM and thus mathematics.

2.1 Research Objectives

From the synopsis so far, two key objectives have evolved and thus been proposed, which are examining:

RO1: Pre-service teachers' conceptions of STEM education.

RO2: The integration of mathematics into STEM units and student achievement gains among pre-service teachers.

3 CONCEPTIONS OF STEM EDUCATION

While different debates have been raised regarding the need to improve the cognition and adequate integration of mathematics in various curricula, the problem has far more been aggravated in terms of its underrepresentation in STEM (Baker & Galanti, 2017; Dare et al., 2018; De Meester et al., 2021; De Meester et al., 2020; Guzey, Moore & Harwell, 2016; Ingvarson, Meiers & Beavis, 2005; Krajcik, McNeill & Reiser, 2008). While not peculiar to developed nations such as the United States (US), a little over two decades now, several barriers to STEM education, particularly in the US, have been attributed to public schools (Lantz, 2009, p. 4), sadly, aiding these *barriers* are evolving *misconceptions*. These misconceptions, as Lantz (2009, p.4) recounts, include:

"STEM education is just another "fad" in education and will soon go away; colleges will not accept credits for high school courses called STEM; technology means additional computers and hardware for schools and students; technology means

the ability to use and apply word processing, spreadsheets, and PowerPoint; all inquiry is open-ended; hands-on learning and inquiry are the same things; STEM education does not include laboratory work or the scientific method; all STEM-educated students will be forced to choose technical fields because they do not have a liberal arts foundation."

In addition to the ongoing misconception pointed out by Lantz (2009, p.4), critiques have singled out mathematics by indicating that;

"Mathematics education is not part of science education, and STEM education addresses only workforce issues; technology education and engineering are disparate and troublesome; technology education teachers cannot teach science or mathematics; engineers cannot teach science and math; technology and engineering are additional courses to be prepared and layered as are science and mathematics courses; [and lastly] STEM education consists only of the two bookends-science and mathematics. "

These misconceptions imply that unless the misconceptions are effectively examined and rectified, form and function in terms of implementation and integration of STEM worldwide, particularly in developing countries, remain ill-structured and vague.

In response, so far, the call is to place far more attention on integrating STEM disciplines (Baker & Galanti, 2017; Dare et al., 2018). Several past and ongoing studies examine this phenomenon. For instance, as a departure from the current research, in recent times, through the use of an evidence-based model, De Meester et al. (2021) examined the process of designing integrated STEM learning material and found positive relation with programmes for teacher training when such a programme is based on integrated STEM

education. A variation of the current study but thrust on understanding science among in-service teachers' implementation of integrated STEM has also been examined (Dare et al., 2018). Through phenomenological multiple case studies, Dare et al. (2018) established a close link with curricular units and understanding of in-service teachers' implementation of integrated STEM curriculum. Informed by the misconceptions and barriers and through a case study, De Meester et al. (2020) showed a need to decrease the gap in various learning levels regarding STEM curriculum.

Contrary, through the case study, while De Meester et al. (2020) and Knipprath et al. (2015) advocated for the integration of STEM disciplines, far less attention has been reported on the contribution of an individual component of STEM, more so with mathematics than the other components.

However, though Mathematics is one of the critical components influencing STEM professional development, as Ingvarson et al. (2005) highlight, little to no evidence exists to establish how mathematics as a universal language of STEM discipline influences STEM programmes on teachers' knowledge, practice, student outcomes, and efficacy. In the past, the focus has also been directed to everyday problem-solving in engineering (Jonassen, Strobel & Lee, 2006). Thus, one key reason to re-examine the dual role of mathematics in STEM, as Krajcik et al. (2008) alludes to, is that mathematics possesses universal evolving learning goals, which could be tailored to the design model of any aspect of STEM. These universal learning goals are essential for developing curriculum materials that align with national standards and incorporate project-based pedagogy.

The inference so far is that regardless of the ongoing focus on the implementation and integration of STEM curricula, many more areas remain ripe for research (Baker & Galanti, 2017; Dare et al., 2018; De Meester et al., 2021; Easterbrooks & Stephenson, 2006; English, 2016). For instance, although De Meester et al. (2021) argued that STEM teachers are far more likely prepared to implement STEM education, researchers are yet to establish how STEM performance and design are accounted for through mathematics. Additionally, studies still need to examine the mathematics-teaching process when teachers design STEM learning materials (De Meester et al., 2021).

The inference is that STEM education will likely be improved by depth through the mathematics design process and how such design processes influence STEM learning materials. One way to achieve this is through an inductive, data-driven algorithm. In simple terms, an inductive, data-driven algorithm allows for a new set of input of a group of procedural rules, which is later revised against the backdrop of available examples. Such a mathematical inclined inductive, data-driven algorithm could be used to apply and build models that describe teachers' process of designing STEM learning materials. For example, while researchers have evidenced that integrating K-12 level STEM disciplines provides learners the opportunity to experience learning in real-world, multidisciplinary contexts, the same is not known as to how the integration of mathematics does to STEM and its ripple effects on STEM fields (Dare et al., 2018). Furthermore, more reported research is needed regarding how teachers, for example, integrate mathematics phenomena in STEM instruction, given the pervasiveness of mathematics language (Dare et al., 2018).

Consequently, contrary to the misconceptions and barriers, the phenomenon must be explored further. Additionally, unlike the studies on in-service teachers, the current phenomena need further exploration by understanding STEM pre-service teachers' experiences in implementing mathematics as part of the integrated STEM curricular units. The present study delineates previous studies using classroom experience data and interviews. These two approaches illustrate different variations of integrated STEM instruction through mathematics while simultaneously understanding pre-service teachers' challenges and successes with such approaches. A parallel work by Baker and Galanti (2017) has already revealed that integrating STEM at elementary levels through model-eliciting activities improves professional development for mathematics coaches and teachers. In other research, an examination of twenty literacy, science, and mathematics practices in educating students who are deaf or hard of hearing revealed an improvement (Easterbrooks & Stephenson, 2006).

Thus, the need has arisen to re-examine the perspectives on STEM integration in K-12 education (English, 2016) and what the integration of science and mathematics really means among pre-service teachers (Davison, Miller & Metheny, 1995).

3.1 Approaches and integration of mathematics in STEM curriculum and student achievement

While several approaches have been used in the past in an attempt to integrate mathematics adequately into STEM and thus improve overall student achievement, the evidence is scarce and varies considerably (Blikstein & Wilensky, 2009; Dickes et al., 2016; Rinke et al., 2016; Sengupta et al., 2018; Wagh, Cook-Whitt &

Wilensky, 2017). Thus far, the research examines the affordances and constraints of explicit STEM preparation for elementary teachers' preparation (Rinke et al., 2016). Through phenomenology, Sengupta et al. (2018) recently investigated computational thinking in K-12 STEM and concluded that computational thinking in the STEM discipline forms the basis for teaching and learning. Using the constructionist approach, Blikstein and Wilensky (2009) examined the learning environment for materials science using agent-based modeling. As with the work of Blikstein and Wilensky (2009), the conclusion reached by Chandrasekharan and Nersessian (2015) is the need to improve cognition using the construction of computational representations for scientific discovery. In the past, the ethnographic approach has also been used in examining neural engineering to model practices in conceptual innovation (Nersessian, 2012). Using bridging analogies and anchoring intuitions, Clement (1993) has shown that dealing with students' preconceptions in physics could be resolved. On the other hand, Danish (2014) applied an activity theory lens to design instruction for learning about a honeybee system's structures, behaviour, and function.

Collectively, what is concluded and supported by Dickes et al. (2016) is that such approaches tend to develop mechanistic reasoning and multi-level explanations in STEM. They also build discipline interpretation and perspectival computational thinking for learning STEM (Farris et al., 2016). This means there is a tendency to develop an understanding of conceptions and conceptual growth in interaction. *As opposed to the misconceptions and barriers stated in the beginning*, such approaches also claim that it enables learning through design and teaching by exploring social and

collaborative aspects of constructionism. The call for such studies has prompted the need to examine the alignment between students playing computational models and goals of inquiry (Wagh et al., 2017). What could be established from the studies, too, is the need to bridge the gap between secondary and higher STEM education by examining trans-disciplinary representational and epistemic practices and shifts.

4. THEORETICAL STANCE PHENOMENOLOGY OF MATHEMATICS AND STEM INTEGRATION AND COGNITION

Informed by the background through the research objectives, phenomenological stance as a theoretical praxis is critical in advancing and improving the integration of mathematics in STEM curricular units among pre-service teachers. This is because, while fledgling misconceptions and barriers have branded mathematics as being predominately algorithmic and heuristic, fundamentally, the experience of mathematics learners is inherently heterogeneous (Sengupta et al., 2018). The heterogeneity includes but is not limited to the engagement and multi-pronged forms and genres of representations beyond algorithmic and computation, which also includes understanding informed translation and interpretation. Note that the Husserlian approach articulates the ongoing study through interviews. Generally, discussions fall within the Husserlian approach to data construction. While the current research is not specifically on the Husserlian approach, some limited attention is provided to the procedure regarding the interview process. This assisted in honing the findings and how they emerged. Following Husserlian phenomenology, it is argued that experiences tend to be directed toward

"intends" through specific concepts, thoughts, ideas, or images, which constitute the meaning or content of any particular experience (Husserl, 2001, 1969). Thus, based on Husserl (2001, 1969), the data collection approach was anchored on the objective, consequently, on phenomenology. Essentially, what that means, as noted by Creely (2016, p. 45), is the need to understand "things from within," which is the Husserlian phenomenological approach to conducting research and inquiring about learning. Further explanation of stages regarding the phenomenological cannons is seen in the Husserlian approach to interviews section.

Nevertheless, in stark contrast with what is known about mathematics in terms of algorithmic thinking and computational abstractions to determine the correct answer, the phenomenological stance, as a theoretical praxis, requires several alternative thinking processes. First, even though several studies have been conducted using various approaches, as demonstrated in the background, there is a call for an epistemological shift (Sengupta et al., 2018). The claim refrains from viewing STEM or mathematics as mastery or overcoming computational logic and symbolic forms to viewing STEM and thus mathematics as a more complex form of experience of various phenomena instead of viewing STEM as rehashing, re-producing a set of axiomatic computational abstractions. Such epistemological perspective or conceptualisation could have led to the minimal use and application of mathematics. Therefore, the proposition is to adopt a view that accounts for discursive, perspectival embodied experiences. That experience accounts for the service and production of computational abstractions and a paradigmatic shift toward a phenomenological approach (Sengupta et al., 2018).

Altogether, the implication is that computational thinking in STEM is good. Accordingly, in mathematics, Sengupta et al. (2018) argue for an epistemological shift from viewing STEM and mathematics, particularly as computational logic and symbolic forms, to viewing the complex structure of experience, which will avoid the risk of seeing our experiences as technocentric. Nevertheless, beyond the early studies, the evidence is that the *epistemology* of both mathematics and STEM cognition has yet to receive much attention. Meanwhile, understanding the *epistemology* of mathematics and STEM cognition has received little attention. In the interim, understanding the *epistemology* of both mathematical and STEM cognition is critical because it allows examining the beliefs and assumptions related to the nature of knowledge for STEM-related disciplines. By implication, mathematical thinking and practices are central to *knowing* and *doing* STEM disciplines. Correspondingly, a phenomenological perspective is needed to understand the uncertainty and subjectivity inherent in the experience of mathematics cognition and hence STEM.

Several vital points or implications should be considered for employing a phenomenological perspective from the discussion. One key reason is that mathematics practices or algorithms are not only developed over a prolonged period but could even be an individual's lifetime. Such a long-lived experience is a consequence of the nuance and complexity of lifelong learning, not only peculiar to mathematics but experiencing different learning generally, suggesting that various phenomena tend to require other forms of algorithmic approaches and hence integration. Consequently, the argument that ease of conceptual difficulty comes with time is closely associated with lifelong

experience of various phenomena. As a result, pedagogical approaches based on lived experiences supersede mechanistic approaches alone. In fact, the corresponding body of experimental studies has supported the process of the phenomenological method, as explained shortly. For instance, Francis, Khan, and Davis (2016) suggested enactivism to explore spatial reasoning and coding in terms of *digital experiences in mathematics education*. Comparably, Grover and Pea (2013b) used a discourse-intensive pedagogy and an Android App inventor to introduce computational concepts to middle school students.

Similarly, Kafai and Burke (2013) suggested that in K-12 programming, moving from computational thinking to computational participation is vital for cognition. Effectively, and as Lehrer, Schauble, and Lucas (2008) affirm, the development of the epistemology of inquiry to *cognitive development* is key regarding the integration of mathematics into STEM. In reaction to Lehrer et al. (2008), a parallel study by Sengupta et al. (2018) suggested a move to the phenomenology of computational thinking as a foundation for teaching and learning mathematics or STEM and hence the need for the current research.

5 METHODS

The current section is devoted to the method used in unpacking the current objectives. In another study, Barroso's (2020) phenomenological approach was used to examine the learning situations of STEM students in pre-calculus. Some conclusions included a lack of comprehension and an inability to learn alternative solutions. The inference is that through the phenomenological approach, STEM students' learning situations in mathematics largely depend on factors such

as comprehension and learning alternative solutions. However, unlike the previous study, the current study intends to examine how to improve the cognition and integration of mathematics in STEM curricular units among pre-service teachers through a phenomenological approach. Therefore, a qualitative approach, as opposed to a quantitative informed by phenomenological design, was used to unpack the research objectives. While Hytner (1999) suggested various guidelines for the phenomenological analysis, particularly with interview data and in qualitative research, phenomenological research design generally provides the opportunity to concentrate on identified phenomena related to lived experiences of the respondents as described in the following subsection (c.f. data analysis for details) (Groenewald, 2004; Hycner, 1999).

5.1 Husserlian approach to interviews

Four stages were followed during the interview process. The first included the ontological description, which involved textual analysis requiring content identification and labeling for specific experiences through interacting with participants about their learning experiences. The second stage was phenomenological ‘reduction’ involving the search for foundational meanings. That is, participants' experiences, together with intentions, are then identified and interpreted. The third stage was hermeneutical analysis. While a vast analytical tool, strictly for this study though, it was for understanding meaning, the process of knowing and learning. The fourth and final stage was synthesis, which involved assembling the results generated through participants based on the initial three stages (viz; ontological description, phenomenological reduction, and hermeneutical analysis).

5.2 Sampling and ethics

Based on the research objectives, a purposive sample was adopted. Crossman (2018) explains that purposive sampling is usually characterised as a non-probability sampling technique, which primarily concentrates on the features of the sample (6 respondents for the current study) and the research objectives. In the present study, the sample criteria or features used were informed by specific criteria in selecting the participants. For instance, one sample criterion was based on pre-service teachers in their fourth year pursuing a Bachelor of Education with a specialisation in mathematics. In effect, it was required that the respondents are mathematically inclined students. In addition, specialising in mathematics meant they also have experience of and exposure to one of the components of STEM so that they are at least able to interrogate one or multiple of the components of STEM disciplines. However, some features which were not considered were independent of whether respondents were high or low-performing students. As such, that feature did not influence the respondents' opinions. The saturation of data determined the sample size (6).

Oral ethics was assured, including privacy, confidentiality, and anonymity. Thus, confidentiality, privacy, and anonymity were at all times observed. In addition to the ethical process, ethical approval was sought and granted by the Nelson Mandela University research ethics committee, thus adhering to the norms and practices inherent to ensuring participants were protected. This also included: To ensure credibility, the participants were known to the researcher as the researcher worked with the participants. Thus, it was easy for the researcher to have continuous conversations with them concerning the

study, which assisted in the accuracy of the data.

Additionally, validity through trustworthiness or transferability of the data, which refers to whether data and findings would yield similar results in a similar setting, was addressed. In this instance, the researcher clearly described the data analysis to ensure that the findings could be transferred to other places. To ensure dependability, which refers to the research process ensuring that it is logical and documented, the participants received feedback from the narratives they wrote. The practice was also conducted to ensure the consistency of the data.

5.3 Data Collection

Informed of the research objectives, one data collection method was used. This was audio (via Ms. Teams) recordings of the structured interview. There were two months of the session from February to March, which included four sessions each week with the participants incorporated into their mathematics lesson. In this respect, the interaction was guided by questions focussing on lived experiences related to pre-service teachers' understanding of improving the cognition and integration of mathematics and its integration with STEM curricula. Cumulatively, interviewees were interviewed on six different schedules (twice in February and four times in March). An additional session was devoted to ensuring that relevant points were all clarified. Additionally, it clarified ambiguities in responses.

5.4 Data analysis

Using the guidelines of Hytner (1999) and Husserlian's approach to interviews from phenomenological data analysis, several steps were adhered to, including the phases or processes. In this process, the researcher listened to recorded

audio repeatedly through bracketing and phenomenological reduction. Additionally, a method of delineating units of meaning was applied. In this process, specific themes or lists of units of significant meaning were identified through each respondent. The process also allowed for the scrutinisation and thus allowed for redundant units to be eliminated (Groenewald, 2004). In effect, the most relevant points of the interview are used. The last three processes included clustering units of meaning for the formation of themes, summarising each interview, and, lastly, unique/ composite summary themes for the interview. While clustering units of importance for building themes, an attempt was made to cluster the most relevant subject matter based on different emerging themes.

Meanwhile, summarising each interview phase was used to validate and simultaneously check and modify emerging themes. First, the general and unique themes phase is meant for all interviews and composite summaries. An attempt was made to look specifically for common themes. Finally, the researcher clustered the common themes based on the research aims.

6 RESULTS

As a recall, the current research examines two key objectives supported by the background and theoretical disposition. For ease of reference, the two objectives included the examination of both pre-service teachers' conceptions of STEM education and the integration of mathematics in STEM units and student achievement gains. The first theme under investigation was; pre-service teachers' conceptions of STEM education. *A respondent called Afrika (pseudonymised)* indicated the need to;

“...tailor the professional development design and support an evolving participant vision of STEM integration.”

In support of Afrika, Kenyatta added that.

“opportunities to engage with mathematics as learners [pre-service teachers] should reflect mathematics with problem-based learning and draw from mathematics design features to modify existing curricular tasks to allow participants to think more broadly about mathematics content within STEM integration.”

Though Dare et al. (2018) and Cunningham and Carlsen (2014) raised concerns regarding understanding the challenges STEM teachers face when integrating other components such as engineering and physics, an additional unanswered question from Childress (1996) and from a participant called Lam

“was whether integrating such components alone do improve problem-solving.”

Such a question is vital because, as Krajcik et al. (2008) noted, developing curriculum materials that align with STEM or mathematics and incorporate project-based pedagogy contributes significantly to national standards. A respondent called Nia suggestion is for understanding STEM teachers' implementations of integrated curricular units through lived experiences or modeling (phenomenological) *“...approach using mathematics as an anchor.”* Additionally, as Francis et al. (2016) allude, it provides an opportunity for other forms of cognition, such as but not limited to spatial reasoning and coding, particularly relevant to digital experiences in mathematics education. Additionally, Zap (a respondent) added that;

“the need for ongoing support as they considered the challenges of curricular pacing and administrative expectation” is critical in integrating mathematics with the STEM curriculum.

Alternatively, Zania highlights the need to

“... share and built[d] STEM integration capacity with a specific focus on mathematics content which advances professional development, encourages STEM instructional leadership and promotes mathematical readiness for STEM citizenship and careers.”

In addition to Zania, Frika (pseudonym) alluded to that

“the degree of STEM integration that occurs in instruction may be related to the mathematical ability to make explicit connections between the disciplines.”

Accordingly, it is possible to develop discipline interpretation using computational modelling (Farris et al., 2016).

7 DISCUSSION

In the current study, and through phenomenological stance, the intent was to understand how to improve the cognition and integration of mathematics in STEM curricular units among pre-service teachers. Several highlighted studies for the integration of STEM in K-12 and university mathematics have led to two critical themes, as explained further below.

7.1 Pre-service teachers' conceptions of STEM education

Primarily, the dominant view of mathematics as a calculations and data representations component of STEM makes it challenging develop reasonable and

realistic conceptualisation of STEM integration (Blikstein & Wilensky, 2009; Dickes et al., 2016; Rinke et al., 2016; Sengupta et al., 2018; Wagh et al., 2017). In response, a claim has been made to situate participants' experiences on mathematics by re-engineering a new form of STEM integration by considering participant-driven, real-life contexts which focuses on making mathematics content explicit and existential by nature in support of Afrika's and Kenyatta's (participants) views.

Several inferences could be drawn from the data and the previous work (Barroso, 2020; Blikstein & Wilensky, 2009; Dickes et al., 2016; Rinke et al., 2016; Sengupta et al., 2018; Wagh et al., 2017). Given the importance of experiential learning, for instance, it could be inferred from Barroso (2020) and other participants (Afrika and Kenyatta) that a phenomenology approach to the learning situations of STEM disciplines holds prospects for pedagogical development as well as lifelong learning. This is because supporting the development of the epistemology of inquiry is vital for *cognitive development* (Lehrer et al., 2008; Sengupta et al., 2018; Wagh et al., 2017). Jointly and supported by Wagh et al. (2017), it is implied that such an approach not only bridges inquiry-based STEM and cognition but also enhances mathematics reasoning by exploring the alignment between students' cognition and computational models and goals of inquiry. As with the views of Danish (2014) and Nersessian (2012), it also encourages the ability to *model practices*. Through the phenomenology approach, it is possible to bridge analogies and intuitions, mainly dealing with students' preconceptions in mathematics and, thus, STEM (Clement, 1993). Such an approach provides the foundation for building cognition because the construction of computational

representations is in discovery mode (Chandrasekharan & Nersessian, 2015). Resultantly, there is a need to consistently shift toward the phenomenology of computational thinking (Blikstein & Wilensky, 2009; Sengupta et al., 2018). Ultimately, just as Roehrig et al. (2012) asked whether adding the "E" is enough to investigate the impact of K-12 engineering standards on the implementation of STEM integration, it will be equally possible to estimate the effect of mathematics influence in STEM configuration. Accordingly, such a quest provides the foundation to integrate mathematics in STEM units and student success (Crotty et al., 2017). Anchored on Nersessian (2012) too, Rinke et al. (2016) suggest that characterising STEM teacher education within mathematics affords and limits the constraints of unambiguous STEM preparation in all stages of mathematics. This is achieved by addressing how teachers' conceptions of integrated STEM education are reflected in curriculum writing, as opined by Lam (respondent) and Ring-Whalen et al. (2016). Though Dare et al. (2018) and Cunningham and Carlsen (2014) raised concerns regarding understanding the challenges STEM teachers face when integrating other components such as engineering and physics, an additional unanswered question from Childress (1996) and a participant *Lam*. Built on Krajcik et al.'s (2008) position, Jonassen et al. (2006), together with Ingvarson et al. (2005) therefore raise the need to effectively explore the factors affecting the impact of professional development programs on STEM teachers' knowledge, practice, student outcomes as well as efficacy. If such an approach is undertaken, it will build STEM by developing design-based integration curricular materials and improving mathematics cognition (Guzey et al., 2016).

7.2 The approaches to integrating mathematics in STEM curriculum units

Previous studies questioned the “readiness to use mathematics as a vehicle for K-6 STEM integration, which maintains an important grounding in the teaching realities of grade-level standards and standardiz[s]ed test preparation” (Farris et al., 2016, p. 22). While it is essential to examine pre-service teachers’ conceptions of STEM education, what is brought to light is overwhelming evidence highlighting the need to explore the integration of mathematics into STEM curriculum (Baker & Galanti, 2017; Dare et al., 2018; Dicks et al., 2016; English, 2016; Farris et al., 2016; Grover & Pea, 2013b; Kafai & Burke, 2013). Several conclusions from both literature as well as data could be drawn. For instance, with English (2016) and Dare et al. (2018), STEM education from K-12 needs to understand the perspectives on integration. The reason, as Dare et al. (2018) and a respondent (Nia) suggest, is for the understanding of STEM teachers’ implementations of integrated curricular units through lived experiences or modelling (phenomenological) “...approach using mathematics as an anchor.” Additionally, as Francis et al. (2016) allude, it provides an opportunity for other forms of cognition, such as but not limited to spatial reasoning and coding, particularly relevant in digital experiences in mathematics education, as Zap (a respondent) added. The implication is the need to use a discourse-intensive pedagogy to introduce computational concepts (Grover & Pea, 2013b). In turn, Kafai and Burke (2013) argued that such an approach enables a shift from computational thinking to computational participation, which is vital for developing mechanistic, experiential reasoning and multi-level explanations (Dicks et al., 2016).

8 CONCLUSION

Based on the objectives, one key conclusion and, thus, the question from previous studies reached is that; what integration of STEM and mathematics means would require not only ensuring teachers’ responses to STEM but mathematics practices through the integration of STEM right through elementary classrooms using model-eliciting activities and responsive, professional development for mathematics teachers. The implication for pre-service teachers’ experiences is the nature of integration. The consensus is to make explicit connections between science, engineering, and technology while maintaining a relationship with mathematics and engaging context through instruction. Keenly, such an approach also bridges the gap between secondary and higher STEM education and facilitates the process of designing integrated STEM learning, which ought to be anchored on an experiential or evidence-based model of phenomenology.

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The Fourth Industrial Revolution: Teachers' Views on Integrating Digital Technologies As a 21-Century Teaching Strategy

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ABSTRACT

Teachers in South Africa are faced with the colossal task of having to prepare learners for the Fourth Industrial Revolution (commonly referred to as 4IR). This undertaking entails aligning their teaching practices with the new demands and aspirations of 4IR goals and standards. Impelled by these new 4IR requirements, this paper asks two key questions: (i) How do selected Physical Science teachers understand the 4IR and their need to prepare learners adequately for 21-century learning? (ii) What are their views on integrating technological applications into their lessons to develop the 4IR skills the learners need in order to take advantage of the products of the 4IR? Theoretically, the paper draws on the Unified Theory of Acceptance and Use of Technology (UTAUT) model. The UTAUT model were deployed to report and discuss the teachers' views about integrating technology into their lessons. Methodologically, the paper adopted a Husserlian phenomenological approach to explicate data elicited from 12 purposively selected experienced Physical Science teachers. One-on-one, face-to-face semi-structured interviews and field notes were the main sources of data. The findings show that the teachers' understanding of 4IR is very basic and counterfactual. However, their views about integrating technology into their science lessons were directly shaped by their perception of the usefulness (PU) and effort expectancy (EE) associated with the use of technology. These aspects (PU and EE) affected their behavioural intentions, which in turn influenced their attitude towards the shift to 4IR teaching. The findings have implications for the professional development of experienced in-service teachers to effectively integrate digital technologies into their lessons to equip learners with the 4IR skills to take advantage of the products of the 4IR.

Keywords: Fourth Industrial Revolution; technology; teachers; physical science; phenomenology; South Africa

RATIONALE AND SIGNIFICANCE OF THIS STUDY

COVID-19 has raised key questions about the accelerated shift to 4IR skills and the teachers' integration of technological tools such as AI applications, social media platforms and various other web-based learning management systems into their science lessons (Koopman, Van Wyk and Koopman, 2020; Koopman and Koopman, 2021). This colossal demand placed on the

shoulders of teachers raises the following questions: (i) Do South African science teachers understand what the shift to 4IR entail, and (ii) Were they sufficiently prepared to equip their learners with 21st-century 4IR skills? If the COVID-19 pandemic encouraged teachers to shift their pedagogies from technology-teacher interaction to technology-led and technology-driven teaching, how will the shift to 4IR affect science teaching? One of the main lessons learned from this pandemic is that teachers will be the key

drivers of new innovations and implementers of the 4IR tools in their classrooms. Therefore, there is a need to investigate more deeply how *experienced* physical science teachers view this shift from traditional teaching approaches to technology-led teaching and its effect on their practices moving towards 4IR. More specifically, what are their perceptions on integrating technological applications into their lessons to develop the much needed 4IR skills their learners will need to take advantage of the products of the 4IR?

Although many studies report on the potential benefits and opportunities that 4IR could offer, particularly the thickened connections between economic growth and development (South African Commission on the Fourth Industrial Revolution Report, 2020; Jandrick and Peters, 2018; Kelly, 2019), the COVID-19 pandemic gave us a glimpse of who will be driving economic development, create new opportunities for the disadvantaged, and soon become the main driver to solve problems in all sectors. We also witnessed how governments across the world (including South Africa) used web-based technological software for contact tracing of infected individuals and how researchers in the medical sector relied on e-technology such as AI to develop a vaccine to curb the spread of the virus. These new applications of online web-based technologies have also given rise to the development of powerfully advanced artificial intelligence applications, such as Chat GPT and various other AI tools and robotics that could be employed in the future and what the future job market might look like for various professions, specifically for teachers. Peters and Jandric (2019) had already predicted how new advances in AI might change the future job markets for teachers and academics due to continual new technological breakthroughs in the 4IR. This raises the question, what is the 4IR all about?

Klaus Schwab (2016) one the architects of the 4IR, already seven years ago predicted how the 4IR will be an age of

unprecedented change with the emergence of automation, AI, 3D printing, digital computing and robotics. Peters, Jandric and Hayes (2021) report on the far-reaching impact of AI and automation, and how this affects (and will continue to affect) almost every aspect of humanity ranging from culture and economics to lifestyle and teaching and learning in schools and universities. It is argued that these phenomena will be built on the advancement of algorithms to expand the internet of things (IoT), which will eventually form a core infrastructural element of the 4IR. The algorithmic IoT is a technologically advanced system that consists of a range of smart and connected sensors where everything and anything can be interconnected through a communication medium (Pal, Hitchens, Rabehaja and Mukhopadhyay, 2020). According to these authors in 2022 as many as 28.5 billion devices such as smart phones, tablets, intelligent circuits, sensors, actuators, and many others is connected to the internet. This means that for every individual 2.3 mobile items are connected to the internet. This signifies the immeasurable pool of data generated from these devices that are interconnected to the various social media platforms, to realize some of the goals of the 4IR.

The South African Presidential Commission on the Fourth Industrial Revolution (PCFIR) (2020) offers an amended description of the 4IR as “an era where people are using smart, connected and converged cyber, physical and biological systems and smart business models to define and reshape the social, economic and political spheres” (p. 20). Linking Schwab’s notion of 4IR to the PCFIR’s description of 4IR gives us a broad perspective of the new world of technological revolutions and innovations that awaits teachers (and many other professions). Thus, preparing teachers for this new technological revolution is long overdue and requires teacher educators to have a good understanding of what this

epoch is all about so that they can develop a new vision for teaching and learning. In other words, in 21st-century teaching it is imperative to acknowledge this vision of 4IR by promoting: (i) critical thinking and problem-solving skills; (ii) collaboration across networks (Krueger, 2018); (iii) agility and adaptability (Peters, 2017); and (iv) entrepreneurialism (Peters, 2017). These are “high-level learning behaviours and skills” that depend on a solid grounding in online web-based technological tools (Wagner, 2010).

With the above understanding of 4IR and 21st-century teaching in mind, this article that adopted a phenomenological approach, asks two questions: (i) How do selected Physical Science teachers understand the 4IR and their need to prepare learners adequately for 21st-century learning? (ii) What are their views on integrating technological applications into their lessons to equip learners with the 4IR skills to take advantage of the products of the 4IR? The answers to these questions will inform and expand our understanding of possible challenges associated with the adoption of teaching approaches to prepare learners adequately for the 4IR. This will also shed some light on issues related to teachers adapting to the demands of 4IR by accepting web-based technology-led learning spaces in their teaching. The main reason for choosing Physical Science teachers is because their subject is viewed as the gateway to preparing learners for careers such as, engineering, computer science, mechatronics, robotics and coding, amongst many others. Since these careers will form the backbone of future technological developments and advancements, such as artificial intelligence, automation, machine learning and robotics, it is important to investigate the teachers' perceptions of 4IR and how they would integrate digital technology into their lessons. Currently, there is little information in the literature on *experienced* Physical Science teachers' understanding of 4IR. This significant research gap,

particularly in the literature on phenomenological studies that investigate *experienced* Physical Science teachers' mental dispositions and intentions regarding the integration of technology as a 21st-century teaching strategy, prompted me to embark on this study that are important in adding value to the existing body of research on teaching and learning as we continue to move towards 4IR.

LITERATURE REVIEW

Waight and Abd-El-Khalick (2012) explain how science teaching has been revolutionised over the last few decades, advancing from the use of pencils and the chalkboard to laboratory equipment, interactive media, and computer hardware and software, including microcomputer laboratories, computer-based simulations and microworlds. More recently, we have seen how science teaching has expanded from pencils and chalkboards to the use of cell phones and iPads with their more advanced social media applications such as Facebook, WhatsApp, Blogs, Wikis and sophisticated Learning Management Systems such as Moodle, Blackboard, iKamva, amongst many others (Koopman, 2020) and AI tools such as Chat GPT. These tools refer to a process of socialization that encourages user-generated exchange of information and ideas as well as the inflow and outflow of knowledge to accelerate innovation (as in AI tools such as Chat GPT). Beastly and Peters (2013) a decade ago had the following to say about these social media tools: “these platforms become the basis for social (co-) production where individuals and communities share, co-produce and co-create content, code and new e-infrastructures and portals” (p.4). The question that begs here is “how effective are these and many other technological tools to promote quality science teaching?

Nxumalo-Dlamini and Gaigher (2019) report on the effectiveness of computer-based simulations (CBS) in the

teaching of electrolysis. Their study links their positive findings to the positive attitudes of science teachers towards CBS and how this rubbed off on their learners. Studies conducted by Ahmed, Almunium and Almabhouh (2016), Ma and Wang (2017) and Koopman *et al.* (2020) report on the tremendous benefits of mobile technologies for learners. Ma and Wang (2017) address how mobile technology (i) provide visual images of objects and scientific processes, (ii) offers greater flexibility for learning, and (iii) encourages greater interactive collaborations across networks both inside and outside the classroom. Koopman, van Wyk and Koopman (2020), who investigated Physical Science teachers' use of social media platforms, reports that YouTube was particularly popular. In agreement with Koopman *et al.* (2020), Bohloko, Makatja, George and Mokuku (2019) explored the use of YouTube as a teaching tool in the Chemistry classroom. They found that YouTube significantly enhanced not only learners' understanding of the periodic table, but also their performance.

Thus, the success of e-technology-enhanced science teaching, Lin, Tang, Shen, Liang, Tang *et al.* (2020) note, depends on the design of its use. Successful integration of technology in the classroom depends strongly on support for and training of teachers. Studies have shown that if teachers believe that mobile technologies do not assist them or their learners in the science classroom, they might use or integrate the technology poorly or ineffectively (Koopman, et al., 2020). Teachers' attitudes towards technology have been linked to aspects such as its perceived usefulness and their confidence as well as to fear and anxiety due to a lack of support and training (Teo, Lee and Chai, 2008). Other challenges external to technology acceptance include the limited technological skills of teachers; some teachers lack confidence and are reluctant to move beyond traditional

pedagogies; poor internet and WiFi connectivity; the loss of what they feel is valuable teaching time; and the preference among some students for traditional approaches (Johnson, Kimball, Melendez et al., 2009; Zhao, Wang, Li, Zhou and Li, 2021).

THEORETICAL FRAMEWORK

To understand the teachers' views on the integration of technology into their classroom practice, the paper draws on the Unified Theory of Acceptance and Use of Technology (UTAUT) (Dwivedi, Rana, Jeyaraj, Clement & Williams 2017) that is integrated with Heidegger's notion of *Dasein* to help understand the teachers' experiences. The UTAUT framework is adapted from Venkatesh, Morris, Davis and Davis' (2003) who modified Davis, Bagozzi, and Warshaw's (1989) Technology Acceptance Model (TAM). These models have been applied to ascertain end users' acceptance of technology across various organizations, including education. These models have its origin in Ajzen and Fishbein's (1980) Theory of Reasoned Action (TRA), which is not going to be discussed further in this paper due to space constraints.

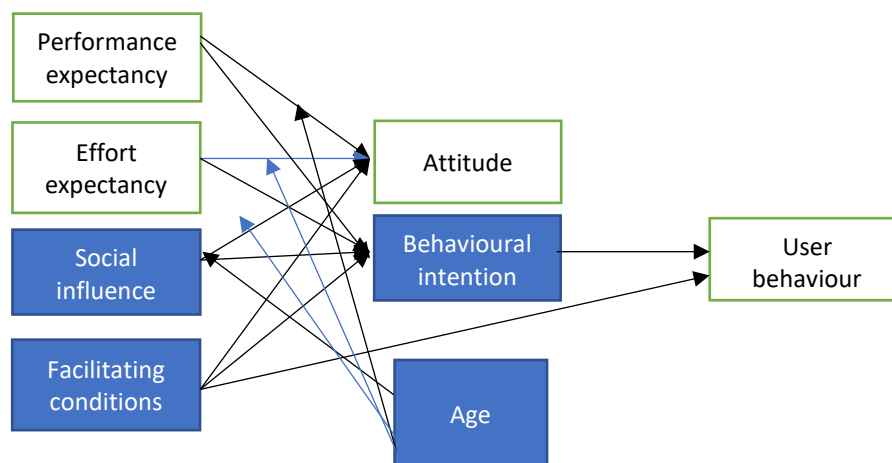
The crux of the UTAUT model is to explain whether or not a person (in this study teachers) will accept or reject new technologies, particularly artificial intelligence applications, robotics, online social media platforms and so forth. Teacher acceptance of technology, these authors argue, lies in its Perceived Usefulness (PU) and Perceived Ease of use (PE). Dwivedi et al. (2017) view attitude as "a mediator between Performance Expectancy (PE) and Behavioural Intention (BI), and between Effort Expectancy (EE) and Behavioural Intention". In other words, attitude and behavioural intention form the basis of user motivation to adopt new ideas linked with technology. Figure 1.1 below illustrates the working of the UTAUT

As illustrated in Figure 1 below, EE is the fusing of expectancy and use of technological tools - such as smart phones, tablets, e-books, etc. Social influence is the degree to which important others (such as curriculum planners and policymakers) believe that the teachers should adopt and implement 4IR skills in their classroom, while facilitating conditions (FC) are the support and availability of resources such as e- and-m-learning gadgets that the teachers might need to plan lessons effectively and efficiently with 4IR skills in mind (Dwivedi et al., 2017). Attitude refers to the teachers' positive and negative feelings towards technology, while the behavioural intention (BI) is determined by the strength of the teachers' intention to use the technological tools. Since the teachers in this study are all *experienced* educators, age could have a direct impact on their attitude and BI regarding the demands of technology on their teaching. In other words, the views of seasoned teachers might be different from those of younger teachers who grew up with the technology and use it daily.

METHODOLOGY

This study adopted a Husserlian phenomenological approach as an appropriate and effective method to investigate the teachers' own understanding of 4IR as well as their perceptions about integrating digital technology into their teaching on the basis of their personal stories. This is because Husserl's phenomenology gives the researcher direct access to the finer details of the teachers' epistemic consciousness that shapes their action and behaviour (attitudes) as they recount their personal views about the 'what' and the 'why'. According to Husserl (1967), phenomenologists do not "make assertions" about what they do not see (p. 9), but aim to gain insight into the teachers' subconsciously held ideas about 4IR and the impact of PU and EE on the teachers' behaviour, and how PU and EE are linked to the social influences as well as the facilitating conditions that motivate (or not) the teachers to integrate digital technology in their lessons.

Figure 1: The Unified Theory of Acceptance of Technology (UTAUT) adapted from Venkatesh et al. (2003)



To capture the voices of the teachers on these issues, the researcher adopted two forms of data collection: (i) a semi-structured, face-to-face, one-on-one phenomenologically oriented interview with each participant; and (ii) field notes. Each of the three parts of the interview was

audio-recorded and transcribed. Part one focused on the context such as the details of their qualifications, years of experience, background and facilities of the school, and so forth. The questions on 'background' and 'facilities' were intended to ascertain whether the schools were technologically

rich spaces – does the school have a computer laboratory, Wi-Fi connectivity, mobile devices and gadgets? Part two of the interview focused on the teachers' understanding of the 4IR. At this stage the focus was on questions such as 'What do you think 4IR is about and how it will affect the way you teach Physical Science?' Part 3 of the interview was intended to deepen the researcher's understanding of their worlds by asking them more personal and probing questions – focusing on their mindsets to understand how they feel about integrating technology as a 21st-century teaching strategy. Here the focus is on asking the participant to sink into their subjective experience and describe it and to elaborate on that description with the help of the researcher. More specifically, it was on ascertaining their main concerns, challenges and fears (if any) about technology – particularly on whether they received training, what skills they have, information on whether or not their classrooms are technologically well equipped, whether learners have smart

phones, and so forth.

Field notes were also taken during and after each interview. The researcher recorded all paralinguistic activities displayed during each interview, such as the length of pauses between responses, facial expressions, attitude and behaviour, tone and pitch of voice. The interview data were augmented with this information to provide a rich description of each research participant's experiences.

4.1 The Research Participants

A total of 12 Physical Science teachers were purposively selected to participate in the study. The researcher 'handpicked' the participants, taking an array of factors into consideration, such as the province in which they teach, features such as race, qualifications, age, gender, region, teaching experience, and the quintile index rating of the school.

Table 1: Overview of the biographical details of the research participants

Pseudonym	Province	Age	Race	Gender	Years of experience	Qualifications	Major subjects	Quintile index rating of the school
A	WC	55	C	M	28	BSc	Chem Math	3
B	WC	62	C	M	38	BSc	Physics Math	3
C	WC	45	C	F	16	BEd (Sc)	Phy Sc Math	5
D	WC	48	C	M	22	BSc, PGCE	Chem Math	5
E	WC	45	C	F	15	BEd (Sc)	Phy Sc	4
F	WC	53	C	F	26	BEd (Sc)	Phy Sc	4
H	WC	56	C	M	34	BEd (Sc), BEd (Hons)	Phy Sc Life Sc	3
I	G	38	A	M	15	BEd (SC)	Phy Sc	2
J	G	53	W	F	15	BEd (Sc)	Phy Sc	5
K	G	55	C	F	24	BSc (Eng)	Chem	5
L	G	48	A	M	16	BEd (Sc)	Phy Sc	3
M	G	52	C	M	21	BEd (Sc)	Phy Sc	2

As this study forms part of a much broader research project that investigates the lived experiences of *experienced*

Physical Science teachers, financial constraints meant that the researcher could select teachers for this study only from

Gauteng and the Western Cape, the two wealthiest provinces in the country (highest income per capita). After the data were analysed, two colleagues – one an experienced phenomenologist and the other a technology education specialist – were invited to work through the data to verify the accuracy of the interpretations. This led to a further refinement of the data after all queries and concerns were addressed.

4.2 DATA EXPLICATION FRAMEWORK

Each transcript provided the experiential accounts and portraits narrated from the point of view of the teachers' experiences. Following Husserlian phenomenology, the researcher rigorously segmented the data and worked through each transcript following a step-by-step approach in breaking down the raw and unprocessed data word-by-word and line-by-line. From these words, phrases, lines and statements he developed units of meaning underlying the subjective intuitions or consciousness of the teachers, guided by the use of high-frequency words, phrases and sentences with similar meanings. These words, phrases and sentences are sorted according to units of meaning and arranged for clarity, keeping intact the relations among these constituents relative to the structure of the whole experience. In the phenomenological tradition the UoM, provide a rich descriptive and interpretive narrative of the structure of the experience of the phenomenon. As such an analysis in the phenomenological tradition means that the researcher must use mostly the direct words of each participant as they appear in the respective transcripts.

To move beyond the Husserlian tradition of analysis, the researcher adopted Heidegger's (1967) ontological philosophical approach, which allowed him to present an interpretive account of each teacher's narrative. In short, this requires the researcher, like a diver to look beneath the surface of the

ocean, scrutinising each word, phrase, sentence and paragraph in the interview transcripts meticulously in order to get an overall sense of the nature and essence of each participant's understanding of the 4IR as well as their teaching approaches. The interview as a whole provided a context for the emergence of specific meanings and events. From this the researcher deduced the teachers' understanding of 4IR and how they would/might approach technology.

ETHICAL CONSIDERATIONS

Trustworthiness of the Data Construction Process and Presentation of the Findings

After, ethical clearance were received from the various institutions the researcher conducted the one-on-one semi-structured interviews. After completing the data construction process, all recorded interviews were transcribed to text. Each transcript of the various data sets obtained from the interview were emailed to the respective participants to verify whether the transcriptions were a true reflection of the interviews. By so doing, each research participant confirmed the accuracy of their views. Therefore, whenever phenomenologists report on a participant's perceptions and understanding of a phenomenon (in this case 4IR), they sketch their subjective reality fairly accurately. To ensure research rigor, the researcher adopted Husserl's (1967, p. xx) mantra of "bracketing the self" during every step of the data-construction process. "Bracketing" oneself from the research participant allows the researcher to go "back to the things themselves". Thus, the researcher allowed every participant's dialogue during the interview to flow in an uncontaminated manner, making him/her the absolute source of the data revealing each participant's idiosyncratic history and make-up with situation, place, people and ideas (Grumet, 2015). Thus, the trustworthiness of a phenomenological

approach rests in the researcher's ability to allow each research participants inner voices and stories be narrated in their own words, to answer the main research questions after adopting an appropriate methodology. Thus, to ensure credibility and validity of the data, the researcher ensured fidelity to the phenomenon, consistency in the process of analysis, and reproducibility and reliability of the data analysis as a whole.

FINDINGS

RESEARCH QUESTION ONE

6.1.1 VIEWS ABOUT 4IR OF THE TEACHERS IN THE WESTERN CAPE

The following comment by teacher A summarises the teachers' views and understanding of the 4IR and how it relates to science teaching:

Well, the 4IR is about allowing learners to use their cell phones. My role now is to teach by letting them search for the information on the cell phone using Google or YouTube. ... I don't know how to do this, but this is what it is. Then they also want us to use Facebook and WhatsApp, but not every learner in my class has a cell phone. So some will get the messages and information on WhatsApp while others not ...

Teacher B, who has 38 years' experience and is also the deputy principal, described the 4IR as a space

where the use of computers allows learners to surf the internet on Google for information. So yes, it's all about technology which is why the Department now wants us to use

our cell phones in the classroom, ...but I'm not sure where I will find the time for this because I must finish my syllabus...

Teachers C and D, like A, who teach in the same school described the 4IR as an era of the cell phone. C said

we are expected to guide the learners on how to use their cell phone as a tool with which they can search for information and allow them to form WhatsApp groups so that they help one another... the problem is, most of the time I am forced to use my own data if I want to share information so I'm not really happy with this.

D added,

we must now be connected to the Wi-Fi at all times so that our learners can develop the skills to use their smartphones and other devices as a way of learning new things and ideas in the science classroom. So the 4IR demands that we use Facebook, WhatsApp and so on; I'm not so sure if it will work because not every learner has a cell phone..."

Teacher H referred to the 4IR as "something that we are encouraged to focus on for a long time now. First, we had to learn how to use these programs on the computer, ... but now it's all about using Facebook and WhatsApp in our lessons".

6.1.2 VIEWS OF THE TEACHERS IN GAUTENG

Teachers I and L (both from Gauteng) pointed out that the 4IR is not

much different from what they are already doing in the classroom. Teacher I commented: *"Well, I know how to use the internet, I'm using WhatsApp and are always in contact with my learners"*. Teacher L said, *"... but we have been doing this all the time, using Facebook ... and all my notes are electronic, this is what I like about the 4IR, I don't have to write out notes on the board all the time because my notes are typed out. This saves me a lot of time"*.

Teachers J and K, both female who teach in the same school and whose classrooms are right next to each other, held similar views to those of I and L about what the 4IR entails. To them it was all about incorporating technology and cell phones into their teaching. J described 4IR as the use of *smartboards, computers, the internet and social media platforms in their teaching*, and K similarly described it as a new era where teachers and learners are in constant contact with each other. She said *"cell phones are now taking over our teaching. When I download a YouTube video from the internet I play it for them in the classroom and if they want me to share it with them on WhatsApp, I can do it"*.

Teacher M said smilingly, *"well this is the era of the computer, the cell phone and any technological device. Although most people use the cell phone for social media, I guess we must do the same by using social media in the classroom..."*

These findings summarise the teachers' understanding of the 4IR in relation to their teaching of science.

6.1.3 RESEARCH QUESTION TWO

Teachers' views in the Western Cape province

Six of the seven teachers who teach in the Western Cape expressed their frustration at the idea of integrating digital technologies into 21st-century teaching. Teacher H's response summarises the practical and social challenges they face:

These politicians, and policy makers are clearly out of touch with what is happening in our schools. I agree, it is a wonderful idea but how do they expect us to drive their agenda. ... I'm sorry [deep frown on face, and harsh tone] but this will never happen in our school. It takes me two periods just to hand out the tablets. ... This takes a lot of time. Then it takes half the period just to get to their attention as they do who knows what with the devices. They don't listen because they are more interested in the thing than what I have to say...

Similarly, teachers F and B echo their concerns with the skills required to integrate digital technology effectively into their classroom practice. They stated that they did not receive adequate training by the Department on how to use technology, nor did they receive training when they studied to become teachers. For example, teacher B said *"I studied in the late 1970s; back then there were no such thing as a computer. I know how to use a cell phone but how to use it in the classroom is a different story"*. Teacher F mentioned that she does not feel comfortable with using these smart devices like cell phones, iPads and tablets. *"Luckily, my son, who is now in his twenties help me, but that is about it because he can't help me with using it in the classroom"*.

Teachers D and E, who teach in the same school (Quintile 5 technical school),

expressed feelings of frustration, helplessness and disappointment with school management, which fails in its task to provide stable internet reception. Teacher D commented that *“one day it works, the next moment it’s off. It looks like they don’t care about our complaints, because I have given up on this, ... I also just don’t care”*. Teacher E added that *“most of the time we [some teachers] have to use our own cell phones as a hotspot ..., then I have to make up for the lost time ... with afternoon classes”*. Teacher B, who teaches in a historically disadvantaged area, expressed the following concern: *“Well, if they are going to give us training, that might help, but I can tell you now that these subject advisors who is supposed to help and guide us are doing a lousy job...”*. He further added *“One [subject advisor] came here one day and said to me I like your notes, ... I later discovered that they go to other schools and give it to teachers there and claim it to be their own work”*. Teacher F, with 26 years of experience said: *“I don’t even know what they expect from us [frowning face and lifting up her hands]. They must first come show me how the content can be linked to smartphones...”*.

Teachers’ views in Gauteng

The findings showed that the Department of Basic Education in Gauteng provides regular training for teachers. These training sessions take place during the week, over weekends and during school holidays. When asked what their views are about integrating digital technologies into their lessons, teacher I said, *“I’m already using Facebook in my lessons. We also have a WhatsApp group on which we post question papers or questions”*. He continued, *“On these WhatsApp groups my learners know what they are expected to do. They can post solutions; they can exchange ideas and they help each other”*. Teacher M commented: *“I must say, this is a very good idea because when our learners go to university than they are well prepared on*

how to use technology ... I can connect with my students and guide them. It’s just that the Wi-Fi must work...”

Teachers J and K stated that although they are not technologically adept, they have the support of management and their learners in the classroom. The following comment substantiates this claim by teacher J: *“You know my learners are very helpful. When we prepare our lessons, we know our learners know we are not so smart as they are when we must use iPads and cell phones. So what I do is I will ask in my lessons help from my learners to show me how to upload notes or a nice video onto WhatsApp”*. J added *“They [learners] are eager to help, so as much as they learn from us, we learn from them”*.

Teacher K added: *“When I don’t know how to do something I ask my colleague who is next door to me ... That’s the only way to survive as technology changes all the time and yes, we must also change”*.

What stands out in Gauteng province is the amount of time devoted to professional development on how to use technology in the classroom. Teacher J supported this statement as follows: *“We really like the workshops on technology offered by the Department. We go for training regularly. Sometimes it’s offered by officials and at other times by teachers, and it really helps”*.

6.4 DISCUSSION

6.4.1 RESEARCH QUESTION ONE

All the teachers in this study (in both provinces) provided a very basic description of 4IR as a technologically enhanced teaching and learning space in which they have to integrate cell phones into their lessons. These descriptions are subjective and counterfactual with respect to what 4IR is about according to the Presidential Commission on 4IR Report.

Counterfactual thinking, Marwala (2021) points out, is essentially a process of comparing what one knows with what is happening. Such understanding or perception he argues, has a direct bearing on the pedagogical decision a teacher makes. The Curriculum and Assessment Policy Statement for Physical Science does not make any reference to 4IR (DoBE, 2011), particularly regarding the potential power of AI and robotics in the science classroom. Furthermore, The Presidential Commission on 4IR Report (2020) shows that 4IR is still in its embryonic stage as no roll out plan about the goals and objectives has yet been provided. This report and the fact that the CAPS is still mainly situated in 3IR, where the focus is mainly on the use of the internet, the use of mobile technological devices and the use of innovative and creative pedagogies explains why the teachers in this study have a counterfactual understanding of 4IR.

Peters et al. (2021) describe 4IR as an era characterised as a bio-digital age where technological advances lead to the convergence of the concept of technoscience and its related nano-bio-info-cognitive models of our understanding of the world, but this understanding has not yet been conceptualised or contextualised in curriculum and policy documents in South Africa. This new paradigm of convergence in the sciences will potentially lead to more technological advances that will gradually be integrated with human behaviour and actions, leading to data-driven technologies such as artificial intelligence (AI).

6.4.2 RESEARCH QUESTION TWO VIEWS OF THE TEACHERS IN THE WESTERN CAPE

The concerns and challenges of the teachers in the WC are mainly related to: (i) lack of skills on how to use/integrate digital technological tools into their lessons (Teacher F), (ii) a lack of training (Teachers B, F and C), (iii) a lack of support from

management (Teachers C and H), (iv) the foreignness of gadgets (Teacher H), (v) loss of time (Teachers H and E), and (vi) helplessness and frustration because of the lack of training (Teachers E and F).

According to Dwivedi's (2017) UTAUT model, these findings indicate a negative PU which culminated in their reluctance to use or integrate technology into their lessons. The findings also reflect the teachers' subjective concerns that digital technology is not beneficial to them or their learners in achieving more effective lesson delivery. Teachers B, C, F and H acknowledged that it will require a lot of effort to fully grasp the effective use of digital tools. This means that their EE in developing the skills to effectively use technology directly shaped their continued reluctance to use it in their classrooms. Drawing on the UTAUT model, when teachers have a negative PU and EE, their mindsets towards the use of technology are directly affected. In the case of the teachers in the WC, their negative mindset about technology due to their low PU and EE is further exacerbated by the social influences (policies in place on integrating technology into their lessons) and facilitating conditions (poor resources in and outside the school). Their age is another contributing factor, as confirmed by teacher F, who pointed out her dependency on her son. All these aspects directly influenced the PU and EE, which negatively impacted on their attitudes and behavioural intentions that made them reluctant to integrate technology into their lessons. Ziegler (2007) reminds us that such challenges culminate in a reluctance to use the technology, which might in turn (as the findings suggest) develop into a fear of miseducating their learners.

VIEWS OF THE TEACHERS IN GAUTENG

The positive views of the teachers in Gauteng are one consequence of the regular

training provided by the Department of Basic Education. This is because regular training instilled in their minds a positive PU and EE (Dwevide *et al.* 2017). Evidence of this is evident when all the teachers pointed out in agreement that the use of digital technologies like Facebook, WhatsApp and YouTube are beneficial for their learners. This finding is in agreement with the findings of Teo *et al.* (2008), who report that teachers' positive mindset towards the integration of technology in their lessons, irrespective of age, encourages them to integrate digital technology as a 21st-century learning tool in their lessons. Thus, when the teachers have a positive disposition towards PU and EE because of continuous training, they mainly see the usefulness of technology in the science classroom. This (positive PU and EE) has a direct effect on the teacher's attitudes and behavioural intentions (Venkatesh *et al.*, 2003), resulting in the use of digital technologies, irrespective of facilitating conditions, social conditions or age.

6.5 CONCLUSION AND RECOMMENDATIONS

Salient findings of this study are that the teachers' very basic description and understanding of the 4IR and the influence of PU and EE on science teachers' mindsets which directly influence their behaviour and attitude towards integrating technology into the science classroom. The teachers' basic misconstrued understanding of 4IR they have in their minds is also expressed in their pedagogical practices. Thus mental disposition, emerged from the findings, can also be described as their transcendental reference to the way they enliven 4IR in the classroom. This means the participants' intermingling with 4IR technologies in the classroom is a function of their perceptive-affective lived experience. From this perspective the findings showed that a teacher's positive/negative mindset towards the use of technology can be linked

to a teacher's belief about its PU as well as the EE, or put differently, a teacher's perceived ease of use (or difficulty) of technology.

Therefore, successful shifting towards the integration of digital technologies lie in continued training. An implication of this study is that there is a need to provide science teachers with effective professional development training. Additionally, although the findings of this small sample size study cannot be generalised, they offer district officials fresh insight into how to design and structure their professional development programmes for science teachers to prepare them for the 4IR. Therefore, preparing teachers for the 4IR and the integration of technology into their classroom practices is a critical 21st-century teaching strategy that will become increasingly essential for physical science teachers.

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The Lived Experiences of Selected FET Adolescents on Comprehensive Sexuality Education in South Africa

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ABSTRACT

There has been alarming sexual health-related statistics that remain unchanged after comprehensive sexuality education (CSE) has been part of the curriculum in South African (SA) schools since the year 2000. The present study sought to examine adolescents' lived experience of comprehensive sexuality education in South Africa. In this qualitative descriptive study with a phenomenological lens of inquiry, 10 participants were purposively selected from all 5 school quintiles in the Western Cape. Semi-structured interviews were conducted and data was analysed with the help of ATLAS.ti. Based on participants' lived experience, the results indicate that approaches of CSE deliverers¹ as well as their delivery methods, disqualify sexuality education (SE) in SA schools from being regarded as comprehensive. Moreover, deliverers mostly teach from a top-down, one-sided approach where learners are excluded and social inequality is reinforced. In addition, the delivery methods focus mainly on prevention, encompassed with tactics that instil fear, disregard healthy sexuality and reinforce discriminative gender roles. The study recommends that a collaborative approach be considered towards the implementation of CSE that aligns not only with national and international benchmarks, but also with individual and contextual needs.

Keywords: Adolescents' Lived Experience, Adolescent Sexuality, Sexual Health, Comprehensive Sexuality Education (CSE), Life Orientation (LO), Phenomenological Lens

1 INTRODUCTION AND BACKGROUND

In contrast to traditional approaches to SE such as abstinence-only or 'abstinence+' (where contraception is included) (Ketting, Brockschmidt and Ivanova, 2020) SE that is comprehensive aims to develop learners' knowledge, skills and attitudes to achieve positive sexuality and good sexual and reproductive health (UNESCO, 2018). The United Nations Educational, Scientific and Cultural Organization (UNESCO) strongly advocates for CSE to be implemented in schools globally due to the advantages it can

hold to prepare young people for a safe, productive, fulfilling life in a world. Especially because HIV/AIDS, sexually transmitted infections, unintended pregnancies, gender-based violence and gender inequality still pose serious risks to the well-being of young people. The past decade has seen changes in attitudes in accordance with the technical guidance on sexuality education (ITGSE) released by UNESCO in 2009 where structured learning about sex and relationships focus on a discourse of healthy sexuality (UNESCO, 2018).

This guide, as well as a meta-analysis of characteristics of international SE

¹ Since adolescents' lived experience reflect upon the delivery of CSE from not only teachers, but other stakeholders as well (such as parents, nurses, peers) the term "deliverer", that is the person who delivers the content, or the source of information, was chosen.

programmes (DBE, 2019) were used as a basis against which to review the SA CSE curriculum. This process was initiated in 2011 by the Department of Basic Education (DBE) with the aim to strengthen the programme. At that stage the programme has been part of the SA school curriculum within the subject of Life Orientation (LO) since 2000 and presented various challenges (Department of Basic Education, 2021). Despite these attempts, almost two decades later, the CSE programme in SA still struggles to significantly change alarming statistics related to the sexual health of SA youth (DBE, 2019).

Sub-Saharan Africa is known for high rates of HIV/AIDS in young people, child marriages, teenage pregnancies, abortion and violence against children (Sawahel, 2021). Adolescents (age 10–19) make up 23% of the sub-Sahara Africa population with more than 80% of HIV-infected adolescents living in the region. Out of the 899 303 babies born in SA in 2020, 34 587 were born to girls aged 17 and younger; 16 042 being aged 17, while 688 were as young as 9 and 10 years old (Bhengu, 2021; Statistics South Africa, 2021). Sexual health-related challenges could lead to a variety of socio-economic problems. Teenage pregnancy and motherhood, for example, create a greater risk in terms of maternal complications, resulting in low survival rates of babies and forcing many girls to leave school early and take on an adult role for which they are not emotionally or physically prepared (Statistics South Africa, 2021). UNESCO (2018) documents that if good quality CSE is not offered to alleviate these challenges, Sustainable Development Goals set for 2030 would not be achieved.

The most recent initiative from the DBE is the development of scripted lesson plans (SLPs), learner and teacher support materials paired with supporting activities that are designed to aid teachers and learners to address CSE topics in a systematic manner

and to improve uniformity and rigour in the delivery of the curriculum (DBE, 2019; Speizer, Mandal, Xiong, Hattori, Makina-Zimalirana, Kumalo, et.al 2018). Since 2021, the Western Cape Education Department (WCED) has initiated extensive efforts to offer workshops for teachers to successfully implement SLPs (Comprehensive Sexuality Education Teacher Training Workshop, 2021) and they plan to train 500 teachers per annum (Gericke, 2022). It is commendable that the DBE is continuously attempting to make substantive changes, but even though these attempts are impressive and well-grounded in research, the challenge remains as to whether and to what extent it is successfully implemented in practice.

1.1 Theoretical framework

An approach that challenges the abovementioned separation between theory and practice, is praxis (Stuart, 2020). Paulo Freire's theory about praxis thus formed the theoretical and philosophical framework that guided this research (Freire, 2000; Given, 2008). Freire (2000:51) defines praxis as “reflection and action upon the world in order to transform it”. The combination of reflection and action is at the heart of praxis (Stuart, 2020), and this study reflects on the lived experience of adolescent participants to bring change in practice regarding the way CSE is presented in an attempt to meet the needs of adolescents more effectively.

1.2 Literature review

Previous research with evidence on how CSE holds advantages for its recipients and is widely documented: In 2016 an evidence review was conducted by Montgomery and Knerr (2016) based on results from 22 rigorous systematic reviews and 77 randomised controlled trials in a broad range of countries and contexts (half of which were in low- or middle-income countries). This review affirms that curriculum-based SE programmes

contribute to: delayed initiation of sexual intercourse, decreased frequency of sexual intercourse, decreased number of sexual partners, reduced risk taking, increased use of condoms and increased use of contraception. These results concur with more recent studies that indicate that school attendance and exposure to CSE are associated with a reduction in risky sexual behaviours (Eisenberg et al., 2022; George et al., 2022).

A systematic review by (Koch & Wehmeyer, 2021) aimed to determine how the CSE programme contributes to the sexual health of adolescents in SA. This review that included 22 studies found that: teachers are in need of expert training, learners are neither actively involved in the learning process nor the development of the programme as they need and would like to be and recommends that the inclusion of their voices and needs are fundamental to the development and delivery of CSE.

Considering the valuable impact CSE can have and that it has been part of the curriculum for such an extensive time, the reasons why the programme does not reach its aims must be investigated. As the ones who experience first-hand what happens in the CSE classroom and must deal with sexual health related challenges, the lived experience of adolescents could help to identify what is needed to develop the programme. Therefore, the aim of the study was firstly, to explore adolescents' lived experience regarding CSE with the objective to, secondly, understand what is necessary to make the CSE programme more relevant, and thirdly, to apply the findings for the purpose of contributing to the programme's development.

1.3 Research question of the study

The following research question was posed: *How can the lived experience of adolescents be utilised to contribute to the development of the current CSE programme?*

2 RESEARCH DESIGN AND METHODS

To reach the aim and answer the research question, a qualitative descriptive research design was deemed appropriate. Qualitative research provides holistic, in-depth accounts and attempts to reflect and describe the complicated, contextual, interactive and interpretive nature of our social world (Salkind, 2010). It is a means for exploring and understanding the meaning individuals or groups ascribe to a social or human problem (Creswell & Creswell, 2018) and is used to get insight into the life-worlds of the participants (Fouché, 2021).

The nature of this study called for an advocacy/participatory worldview (Creswell & Creswell, 2018), since this worldview holds that research contains an action agenda for reform that may change the lives of the participants. The participants in this instance will reap the rewards of the research when the CSE programme is improved with their help, to better meet their needs. Advocacy research therefore provides a voice for vulnerable participants who are often excluded from research that is about them, raising their consciousness or advancing an agenda for change to improve their lives.

2.1 Research design

A phenomenological strategy of inquiry was used, since this study aimed to understand how the world appears to adolescents at whom CSE is directed. Phenomenology draws heavily on the writings of the German mathematician Edmund Husserl (Husserl, 1970) and those who expanded on his views, such as Heidegger, Sartre, and Merleau-Ponty (Spiegelberg, 1982). The results of a study with a phenomenological lens are a general description of the phenomenon as seen through the eyes of people who have experienced it first-hand (Leedy & Ormrod, 2001). Specifically, Moustakas's (1994)

transcendental or psychological phenomenology was employed since the focus was less on the interpretations of the researcher and more on a description of the experiences of the participants. The focus is on their subjective experience (Biggam, 2011), the 'lived experience' (Given, 2008) or the 'lifeworld' (Schwandt, 2007) of the adolescent as the receiver of CSE. It is from the subjective experience of adolescents who receive CSE that information was gathered in order to make recommendations for the development of the programme.

2.2 Study participants

It was decided to include 10 participants (Creswell & Creswell, 2018; Fouché, 2021; Mouton, 2001), that is two participants (one who identifies as being male and one who identifies as being female), from each of the five school quintiles² in the Western Cape to make the sample representative of various contexts. They were chosen from the Further Education and Training (FET) phase

(Grade 10–12) since they are able to reflect retrospectively upon CSE that they received throughout their school career. Purposive sampling was thus used, a type of non-probability sampling where a particular case is chosen because it illustrates some feature that is of interest for a particular study (Strydom & Delpont, 2005).

2.3 Data collection procedures

Prior to the commencement of data collection, the WCED gave approval and provided a list of schools from each quintile in the Western Cape. A school principal from each quintile was approached asking permission to do research at their respective school. After permission was granted, LO teachers at each school acted as gatekeepers who identified participants who might be willing to participate. Consent and assent forms were sent to potential participants and their parents/guardians. After consent and assent were given data was collected at schools by means of semi-structured individual interviews.

Table 1: Demographics of the study cohort

School	Race	Language	Gender	Grade
Quintile 1	Coloured	Afrikaans-speaking	Male	Grade 12
	Coloured	Afrikaans-speaking	Female	Grade 12
Quintile 2	Coloured	Afrikaans-speaking	Male	Grade 12
	Coloured	Afrikaans-speaking	Female	Grade 12
Quintile 3	Coloured	Afrikaans-speaking	Male	Grade 12
	Coloured	Afrikaans-speaking	Female	Grade 12
Quintile 4	Black	English-speaking	Male	Grade 10
	Black	English-speaking	Female	Grade 10
Quintile 5	White	Afrikaans-speaking	Male	Grade 12
	White	Afrikaans-speaking	Female	Grade 12

² In SA, all public schools are categorised into five groups, called quintiles, largely for purposes of the allocation of financial resources.

Schools in quintile 1, 2 and 3 have been declared no-fee schools, while schools in quintiles 4 and 5 are fee-paying schools (Grant, 2013; White & Van Dyk, 2019)

This data collection method is suggested for studies with aspects of a phenomenological approach, so that probing and follow-up questions can be used to explore the lifeworlds of participants in more depth. Table 1 above is a summary of the demographics of the study cohort.

2.4 Data analysis

The collected data was phenomenologically analysed as suggested by Moustakas (1994). Firstly, the data were self-transcribed and translated where necessary. Secondly, the researcher, together with an independent reviewer, read and re-read transcriptions and identified and compared significant statements. This was done to achieve interrater reliability that Marques and McCall (2005) suggest be used in studies with a phenomenological lens of inquiry. During this phase, also called “phenomenological reduction”, the researcher attempted to set aside all preconceived experiences to best understand the experiences from participants' point of view (Moustakas, 1994). An initial list of ideas about what is in the data and what is noteworthy about them was generated. Thirdly, significant statements spoken by participants formed meaning units that advance the textural and structural descriptions of the phenomenon (Moustakas, 1994). Meaning units were refined to form themes. Themes were named and defined by means of Schutte's dendrogram technique (Refer to Figure 2), a technique developed to take a researcher through a proper conceptualisation process to form an argument systematically (Schutte, 2006). Lastly, a cluster of fully worked-out themes were finalised followed by the write-up to capture and describe the essence of the participants' experience of CSE. Husserl's concept of bracketing or epoche was used throughout the process to steer clear of imposing any pre-set

explanations or ideas since the emphasis is on the lifeworld of the adolescent (Creswell & Poth, 2018; Moustakas, 1994). The computer-assisted qualitative data analysis software that facilitates analysis of qualitative data for qualitative research, ATLAS.ti, was used throughout to build levels of analysis and see the relationship between the raw data and the broader themes (Creswell & Poth, 2018).

2.5 Ethical considerations

All ethical aspects of research, such as voluntary participation, informed consent and assent, the avoidance of harm, no deception, anonymity and confidentiality, no violation of privacy, and the debriefing of respondents after the completion of the project were regarded as essential (Babbie, 2010; Strydom, 2005; Yin, 2009). Interrater reliability (Marques & McCall, 2005) ensured by the cross-checking of significant statements by the two reviewers ultimately contributed to the elimination of researcher's bias and strengthening the findings of the study.

Figure 1 below represents an overarching summative visual representation of the research process that was followed.

3 PRESENTATION OF DATA

The results of this study derive from the essence of the lived experience (Creswell & Poth, 2018) of the participants with regard to CSE that is reflected in the two main clusters of themes as they emerged from the transcribed data: the deliverers and the delivery of CSE. Significant statements or quotes that provide an understanding of how the adolescents experience CSE, also called horizontalization (Moustakas, 1994), are included verbatim. Figure 2 below is a visual summary of the meaning units and clustered themes.

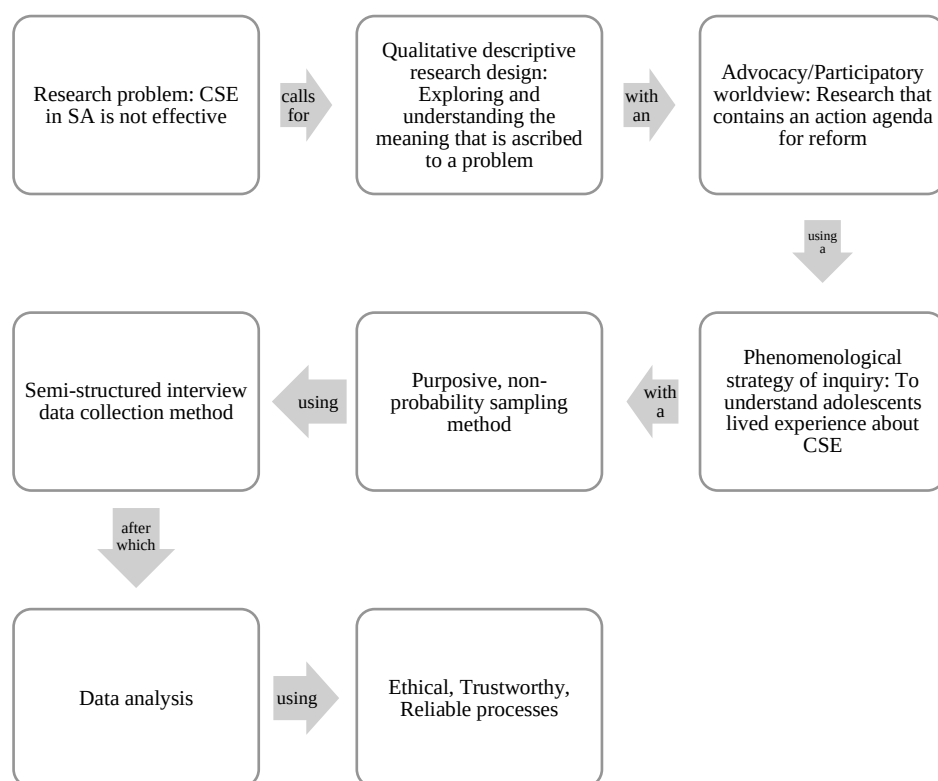


Figure 1: A flow diagram of the research process

3.1 Cluster 1: The deliverers of CSE

The lived experience of adolescent participants is reflected in the various deliverers who present SE to them, namely teachers, other adults in the educational setting, the adolescents themselves and their peers.

LO teacher

At the forefront of CSE delivery, is the LO teacher. Participants' lived experience included LO teachers' typical approaches to teaching and their perceived level of comfort when doing so. Even though some positives were mentioned, such as participants' appreciation for interactive learning and teachers' ability to understand and respond towards the complexities that accompany adolescent sexuality, the dominant themes were various approaches that teachers use.

An approach often identified by participants, was a more traditional one where the teacher dictates what happens in the classroom with the learners having very little to no say at all. Learning where the teacher governs what happens in the classroom with the exclusion of learners is mostly employed. Adolescent participants as passive onlookers reported the need to learn more skills to deal with their sexual health, as opposed to mere book knowledge.

P4G³: *They just teach it as a subject, they don't actually get into, like, actually talk to the children. They are just teaching it like, okay, so you are going to write a test about this, so you need to learn this. It's not like a topic they can sit down with the children with, talk to the children with.*

³ To protect the identity of participants, "P" is used instead of their names, and the sequential order of the interview and the gender the participant

identifies with. For example, "P4G" was the fourth participant who was interviewed and identified as a girl.

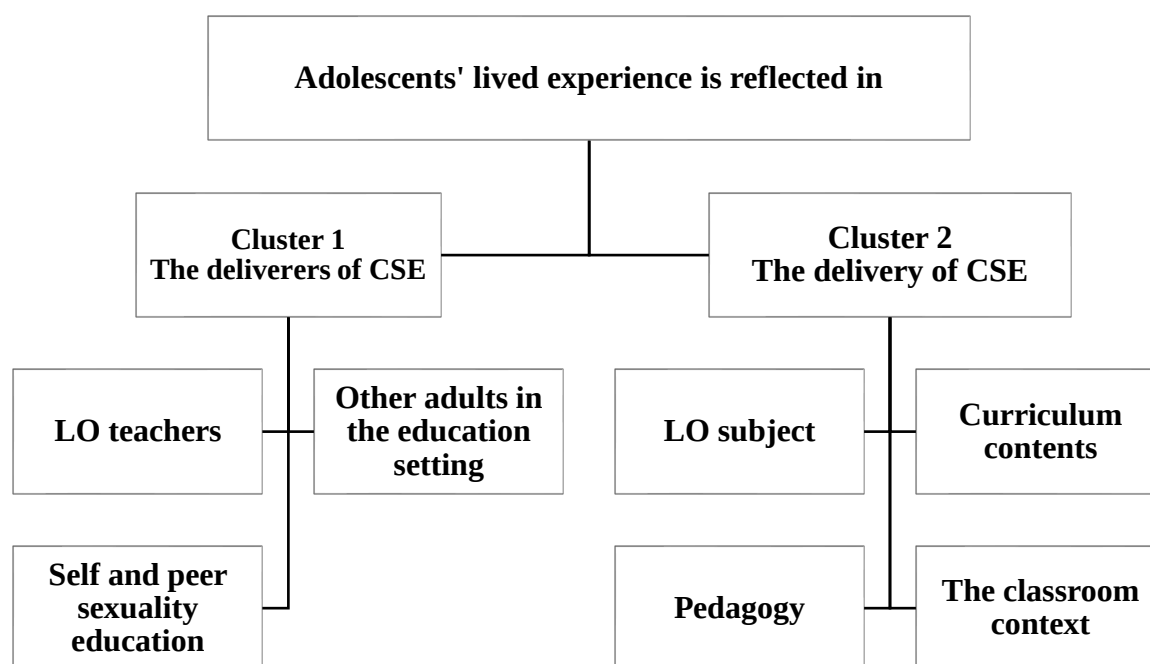


Figure 2. Clusters of meaning that emerged from transcribed data, developed by means of the dendrogram method (Schutte, 2006)

P6G: Last year we had to copy the textbook, the whole textbook. Miss, it does not benefit the children to write everything down. They get nothing out of it, not even examples. Okay we are now reading about sex, sex is this, write consequences of how you see yourself in this position. It will not help you at the end of the day.

Some teachers approach SE superficially in what participants describe as brief, shallow or once-off. Content is not discussed as deliberately or as in-depth as participants expressed a need for and some content is omitted in its entirety due to the teachers' discomfort with the topic.

P1B: Maybe the problem is, we have 'the sex lesson' (he uses the air quote). About once or twice a year. I think sexuality is one of the areas where LO is completely behind. It's like a chapter or two in your textbook and they also move very quickly over it. It does not

discuss the issue very deeply. Everything is addressed in a very superficial way. It's more like, okay yeah, uhm, this is sex, don't do it. Next topic.

P5B: They do not talk to the children, they basically read what's going on in the book and then they will say okay we are now done with this, we move on.

P9B: Some people will not go deep enough, they will just stay at the surface, because how can I say, it's going to get personal if they go deeper.

P1B: I think it's something that is not done. It is thought, 'We need to educate them about sex,' uhm, here are the main bullets we feel comfortable discussing with the kids.

Some teachers force their personal convictions onto learners and approach SE

in a one-sided manner. Discontent was voiced in instances where teachers disregarded or did not allow for diverse opinions around perceived contentious topics.

P2G: It also happened every now and then with the sexuality and sex stuff, always looking at the one perspective that also made me feel a little bit uncomfortable because I had, like, more of a broad perspective, and I'm like, am I wrong? I would just say also have more conversations about it and not always be one-sided about it.

Participants made a clear distinction in that it is not the curriculum content that is one-sided, but rather what and how the teacher decides to teach it.

P2G: I also read every now and again through the textbook before I write a test and then I will see that the textbook is much more open about it, so the textbook is not always one-sided.

Participants report on teaching from a moralistic point of view, where right, wrong and religion are commonly used as motivation or to convince learners to do what the teacher views as the proper way to deal with their sexuality where they are encouraged to abstain from sex. What is offered to participants is thus subjective and ruled by what the teacher deems appropriate.

P1B: There is this culture of talking around the problem because I think we are in a very religious community and here the sentiment is mostly you wait until you get married, with your member of the opposite sex, and that's the end of it. Uh, so I think to ... so if you end up offering a healthy in-depth sexuality

thing, it almost goes against the culture of this place.

Some teachers follow a prevention only approach where participants perceive the motivation behind SE as a cure for social ills related to HIV/AIDS and teenage pregnancies where the focus is on the harmful consequences of sex. Even though participants do in fact deem the teaching of prevention as important, they are asking for more depth.

P7B: She mostly focuses on communicable diseases and how to protect yourself from all that stuff and that you have to wait for the right time and the right person.

Other adults within the educational setting

Much of the SE that participants in this study received happened outside of the LO context and was delivered by adult deliverers from various outside institutions such as members of the community or organisations that visited the school for the purpose of educating learners sexually. Similar to teachers' approaches, the focus here too was mainly on the prevention of the harmful consequences of sex and was mostly delivered through a once-off visit to the school.

P10G: Yes, they came to school. I think it was the mobile clinic's nurses. Then they talked about contraception that learners may use, and to prevent pregnancy. And contraception is not always going to help, but condoms are also going to help prevent the infections. Even if you are on contraception, you should still use condoms.

Self- and peer SE

Participants claim the way they think and learn about sexuality is often not developed in the classroom, but rather through personal reflections or

conversations that happened outside of the classroom. Learners tend to discuss the more explicit details of sex with friends outside of the classroom context.

P2G: *We always have a lot of conversations about it after the time.*

P10G: *I also learn a lot from my girlfriends who are already sexually active.*

Children sometimes get information from peers which is based on myths, half-truths or false beliefs.

P10G: *They (her girlfriends) say if you have your period, and you sleep with a guy, it also changes something in the guy. They say it makes him obsessive over you. It makes him obsessive, and he will fall in love with you deeply, and something like that they said.*

A recurring dominant theme, for example, is a belief amongst girls that the use of contraception can make you infertile, thus discouraging its use.

P8G: *When they say there are contraceptives, I hate it, because in Natural Sciences we learned, we did more in biology last year, and then I found out those drugs actually damages the uterus. So... and when people tell children they can... okay, well they do it the right way... use protection and so on. But still, it's still wrong, because the uterus is damaged and at a later stage if you can do it with your married husband and if you want children then you may not be able to because of those drugs.*

3.2 Cluster 2: The delivery of CSE

Regarding the delivery of SE, participants mentioned the LO subject, the content that is covered, pedagogy and the classroom context.

The LO subject

Participants recommended that CSE should be separated from the LO subject due to its tarnished status that impacts on the effectiveness of CSE delivery.

P2G: *I think maybe if one can every now and again have like a course such as what we had in Grade 6, a course that learners can attend during their grade period or grade assembly because then one also listens more than in LO.*

P3B: *I think, instead of making the sex ed part of LO, it should be made its own subject.*

LO is viewed as a subject of less importance and therefore tends to be undermined by learners. The delivery of content is described as repetitive, which could cause boredom and learners 'switching off'.

P2G: *Many learners do not pay attention in LO lessons, it's where people sleep or do homework.*

P1B: *This is the 5th year in a row we're doing AIDS. LO is to a certain extent diminished by students; it's not taken seriously.*

Curriculum content

Participants distinguished between what is included and what is excluded from the curriculum as it is presented to them. Contraception, HIV prevention, pregnancy prevention and the physical aspects of sexuality (biology) are mostly emphasised.

P4G: *They also told us that if you do choose to actually go ahead with having intercourse, the procedures to take, contraceptives, it's very important, and that clinics are always available for condoms and a lot of stuff. Injections, even here at school, actually.*

Even though they are in the textbook, what are perceived as forbidden and sensitive topics are typically fully or partially excluded from discussion. Participants mention that contentious matters are dealt with in class from a strong moralistic point of view.

P1B: *Okay like, here's a weird one, but masturbation is something I think, I think it's normal, it's something one does. It's okay, it's healthy. It's a way of satisfying your needs without hurting people. Uhm, but things like that will inevitably also be portrayed as bad and then what happens in the end is you sit with kids who do not know how to deal with these feelings, and uh, feel bad. And in the end you cultivate a society where those kids go on and the next generation... You know uh, you cultivate a society that is afraid of sex and if you are afraid to talk about sex then the problems are also never going to be addressed directly. You are never going to be able to develop people to a point where they can be comfortable about it and deal with it in a healthy way.*

P2G: *Like abortion for example. When a teacher, it was still last year when one of the teachers was talking about it, but they only talk about the one side of it, like the bad and you should not do it, and never looked at the other perspective.*

They reveal, furthermore, that although all human beings are sexual in nature, aspects such as the acceptability of sexual urges and that sexual intercourse is pleasurable, are excluded entirely.

P9B: *It's human, it's a normal part of who we are, so you also do not always want to say sex is bad, bad, and if you do it you are bad.*

Participants find that they lack skills when it comes to sexual decision-making and the ability to deal with sexual intimacy.

P2G: *It's hard and yeah, like for example, I got a boyfriend like two months back and it's always sitting there, but it's like no, I can't, I have to wait. And they do not teach you that. Before I was in a relationship, I just said, 'Oh it's so easy, you just say no!' It's not so easy!*

Pedagogy

Participants reported on preferred ways in which they would like the content to be delivered to them. Participants prefer gender-focused CSE. The SE of boys is deemed to be neglected and attention should be given to both genders equally that does not reinforce discriminative gender roles. For example, participants state that the onus tends to lie specifically on girls, rather than on both genders, to abstain from sex and to deal with its consequences.

P4G: *I think it's because if they managed to get this message in the girls' heads. If the girls can decide, no, we're going to abstain, then the boys won't have anyone to actually have sex with. If they get one party on the right path, then, yeah.*

Participants ask for discussions about sexuality that are open, honest and in depth. They would like all aspects of sexuality to be thoroughly covered and they disapprove of SE that is superficial or concealed in nature.

P3B: Knowledge is power, if you don't know these things, how will you protect yourself? I want them to be broad, and more realistic and honest.

P5B: They can go into more detail. Give more details. Give more examples. They need to go deeper. If the teachers go into more detail, the learners will understand it. Then they will not make bad decisions.

They prefer content delivery to be more technical and practical, for real-life examples to be used and to learn from example.

P3B: They put something here, then they say this is how you put a condom. This is how you do this. So, I think maybe we should use, like real life examples.

P8G: I have seen here and there is a speech bubble of someone telling about a personal experience or so. I do not know if schools do it this year, but people have to just volunteer themselves to say I will talk about my experience with it and so on. Schools should get this. Just get people to come talk. This will help a lot.

Participants voiced what they view as harmful ways in which the curriculum is delivered. Some allege curriculum delivery encourages shame and low self-esteem.

P1B: I think portraying sexuality as a bad thing is damaging to children, it's bad for your self-esteem, and I think everyone has sexual urges when they're young,

and when I hit puberty, my reaction to that was shame.

The fact that the curriculum is delivered with emphasis on danger and disease, where sex is portrayed as something bad and where fear is intentionally instilled was the most prominent experience reported by participants in this study. Deliverers use various tactics to scare adolescents away from sex by making them aware of horrific consequences they might suffer if they become sexually active. Participants dislike scare tactics and do not view them as effective SE practices. On the contrary, they reported that it is damaging and that it traumatises them and that they can still remember it for years to come.

P1B: I think the deterrent aspect, of how sexuality is not portrayed as a healthy, natural part of you, because I also think with teenagers it's a big problem. We are all terribly uncomfortable with our bodies and who we are. Uhm, and. (Sigh.) The fact that it's almost like the danger and thing you have to be careful of and have to, uhm, almost try to stay away from. They say abstinence is the best way and that's true, but that's the way sexuality is portrayed, I think is damaging.

An instance was specifically mentioned by a Grade 12 participant where in Grade 6, a deliverer used two eggs: one smashed, representing girls who are sexually active and one whole egg, representing virgins.

P2G: I only remember this one part... she had an egg and like the one egg was perfect, like the girl who had never had sex, and the other egg was like rubbish and that was the girl who had sex like all the time before she got married. And like, yes, be a good egg, do not be a

bad egg. That's what I can remember about it.

The classroom context

Participants talked about their experience of what takes place in the SE classroom. They face judgement from fellow classmates when certain topics are discussed, or questions asked. Classmates also dictate what will and will not happen in the classroom context and the conversations held.

P2G: You feel careful to express your true opinion because you know there are such strong opinionated people in the class.

When CSE is dealt with in the classroom, many learners' responses are to laugh and joke around. Participants mentioned this, as well as the impact that conversations in the classroom have on sexually active learners as reasons why teachers prefer to omit certain content.

P10G: If there's a topic of sex coming up then they want to laugh about it and make jokes and so on. And that also pushes others down who are already sexually active. Many children are already sexually active at this stage and some of the learners know who they are, so then they talk about sexual health and then they point fingers at each other.

4 SUMMARY, IMPLICATIONS AND OUTCOMES

The results of this study, based on the lived experience of participants regarding the deliverers and delivery of CSE, indicate that CSE in SA schools is not delivered comprehensively. This could be a contributing factor as to why SE that has been offered in SA since 2000 has not been

able to have a significant positive impact on the sexual health of young people.

Deliverers must in many instances be acknowledged for their positive contributions regarding young people's sexuality. Rooth (2005), being one of the first researchers to evaluate the effectiveness of LO, emphasised the importance of experiential and interactive learning years ago and it seems like some teachers endeavour to implement this. However, in other aspects, deliverers adhere to practices that diminish its comprehensiveness. Participants often referred to adults' discomfort with teaching CSE as a barrier to learning. This indicates that recommendations to attend to teachers' discomfort made by various researchers (Beyers, 2012, 2013a, 2013b; Francis, 2016; Mturi & Bechuke, 2019) are yet to be addressed. Together with discomfort, the various teaching approaches outlined by the results contribute further to SE delivery that is not comprehensive. Various studies on CSE in SA point to the consequences that these one-sided approaches have on the teaching of SE (Beyers, 2011; DePalma & Francis, 2014; George et al., 2018; Helleve et al., 2009; Jearey-Graham & Macleod, 2015; Mturi & Bechuke, 2019; Runhare et al., 2016) as well as a more recent international study on the same topic (Ketting et al., 2020). On the contrary, a wide range of advantages of SE that is in fact comprehensive in nature is well documented as summarised by UNESCO's ITGSE (UNESCO, 2018). In fact, out of 22 interventions included in a systematic review by Kirby, Obasi and Laris (2006) the only one that increased any measure of reported sexual intercourse was a non-curriculum-based peer-led intervention.

Apart from deliverers that diminish the comprehensiveness of SE, delivery is also to blame. If delivery is dealt with successfully, half-truths and myths would be replaced by truthful and factual knowledge as well as valuable skills

development that will leave less room for sexual predators to exploit adolescents' ignorance and vulnerability. The status of the LO subject as the vehicle of delivery is starting to shift from tarnished to more positive, in that tertiary education establishments are focused on producing well-trained teachers and sharing information with future teachers on how to reverse the detrimental aftermath of previous malpractices (Gous et al., 2015). A recommendation inspired by participants of this study, is for the DBE to consider employing SE experts per district, whose sole responsibility it would be to go to all schools to present SE as a module on its own. That would ensure that educators who are well trained and passionate will deliver the content in a comprehensive manner. An online SE programme could also be considered, where all learners could access an interactive sexuality education platform that is informed and developed based on the current curriculum, with adolescents' needs, recommendations and unique contexts incorporated.

It is acknowledged that the contents of the CSE curriculum are based on sound international academic research (DBE, 2019; UNESCO, 2018) and if teachers were to follow the SLPs without subjectively deciding what to include and what to exclude, learners would receive SE that is world renowned for its success. To ensure that pedagogy and what happens in the classroom context adheres to CSE standards, the ITGSE as well as SLPs are clear and leave no room for confusion. SLPs assist teachers in various ways. It helps teachers to create a safe, conducive classroom environment. SLPs explain what to do when teachers are challenged by the content of CSE. Furthermore, it supports teachers to create safe learning spaces that are inclusive and rights based. Teachers are also guided to deal with the impact parents could have on the learning experience. It helps teachers to better manage classroom discussions, how to use group activities and

facilitate discussion. Even aspects such as dealing with laughter, how to monitor peer discussions and engagements are clearly outlined. It is thus the inference and main recommendation of this study that the focus should be on the successful countrywide implementation of the SLPs.

A limitation is that LO teachers as gatekeepers generally identified the most exemplary students to participate in this study, which could have caused the results to be skewed. The strength of this study lies in the inclusion of the lived experience of adolescents that is often missing from research that is about them (Koch et al., 2019).

5 CONCLUSION

The study concludes that DBE is making extensive and commendable efforts to attend to the delivery of CSE in South African schools. It is recognised that most teachers and other deliverers are doing their best to educate children in a way which they consider to the advantage of the child and that children are eager to learn. However, the reason why CSE in SA schools is not effective, is because it is not delivered comprehensively. It masquerades as comprehensive due to its name and prescribed curriculum content, but the lived experience of participants tells us it is still taught in a non-comprehensive manner. Content is mostly delivered once-off, superficially, from a subjective, teacher-centred, top-down approach. There is often a strong focus on prevention and abstinence. Tactics that instil fear and disregard healthy sexuality is mostly used. Teachers also tend to reinforce discriminative gender roles. Findings from this study indicate ways in which this could be addressed. Learners have the right to receive SE that is, in fact, comprehensive to ensure that they are assisted to make well-informed decisions that could benefit their sexual health and their lives in general. A recommendation for future research is to

utilise the recommendations of adolescents from this study by co-creating a praxis for CSE teachers to support them in the delivery of the programme that is more responsive to the needs of adolescents.

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Teachers Lived Experiences of Teaching and Learning in A Rural School in the Western Cape

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ABSTRACT

The complexity and *bifurcatedness* of teaching and learning in the South African education system have been well documented (Singh, 2020; Spaul et al., 2021). However, discussing the intersectionality between race, rurality and inequality as it relates to teaching and learning through a phenomenological lens remains a gap. This article discusses experiences of teaching and learning through the voices of teachers in a small rural town, situated in the Karoo. Using a qualitative approach of semi-structured interviews, the chapter presents insights into the lived experiences of two high school teachers. These responses, through the discussion of teaching and learning, school context, and professional development experiences, are reflected through Paul Ricoeur's variant of philosophical hermeneutics and justice. This chapter demonstrates that teaching and learning are more than a knowledge exchange in the classroom. It is also about affective support and an unspoken understanding of how the legacy of the past political era(s) is cemented into their daily interactions. The chapter contributes to the literature relating to rural schools as *banished spaces* in South Africa and positions phenomenological research as a conduit for social justice.

Keywords: teachers, rural schools, school context, professional development, inequality, phenomenology

1.INTRODUCTION

South Africa's education system is in crisis. Not only are learners grossly underperforming, particularly in literacy and numeracy, but teaching and learning contexts remain sub-optimal, with the least conducive school contexts being situated in rural areas. The latest National Education Infrastructure Management System reports that thousands of schools in South Africa still have pit latrines, unreliable water supply, unreliable electricity supply, limited access to ICTs and no or dysfunctional libraries (Department of Basic Education [DBE], 2020). Most of these poorly resourced schools are situated in rural settings. As Du Plessis and Mestry (2019) lament, rural schools "face severe

challenges that are unique to their environment" and are plagued by instances of poor parental involvement, a lack of funding and underqualified teachers, among other things (p. 1). Barber and Mourshed (2007) note that the quality of an education system cannot exceed the quality of its teachers, thus, understanding the lived experiences of teachers is crucial if (educational) interventions are to be successful. More specifically, gaining insight into teachers' teaching and learning experiences, the context in which they teach and their opportunities for professional development will illuminate the gaps that prevent quality teaching and learning exchanges because "a positive teaching approach can contribute to the well-being of learners despite the challenges they may

be facing” (Groenewald, Barnett, & De Klerk, 2021, Para. 2).

By presenting accounts of teachers’ lived experiences in a rural high school in the Western Cape Province of South Africa, this paper argues that the teaching and learning contexts of many rural schools in South Africa militate against social justice and the pursuit of quality education. In addition, through the intersecting of race, rurality and inequality using Ricoeur’s variant of philosophical hermeneutics and justice, the paper demonstrates that, firstly, previously marginalised rural communities have not fully benefitted from the effects of a truly democratic dispensation. Secondly, the experiences of teaching and learning in rural schools cannot be divorced from the community context in which the school is situated and, thirdly, teachers’ lack of professional development opportunities negatively impacts their ability to develop the skills that are required to teach in rural contexts. The paper begins with a look at education policy provisions that govern schools in South Africa and then reviews the literature on rurality and rural education in the country. This is followed by a discussion of the theoretical underpinnings that frame the discussion and the findings as well as a brief overview of the study methodology. The latter part of the paper presents and discusses the findings. The paper concludes with a synthesis of the key findings and the implications of these findings for social justice, addressing inequalities and the pursuit of quality education, with particular emphasis on how phenomenological research may address and mitigate some of the challenges presented here.

2 POLICIES IMPACTING THE DELIVERY OF BASIC EDUCATION IN SOUTH AFRICA

South Africa’s draconian history of separate development did not only regulate

people’s social lives, but it also impacted how they were educated, the careers they could pursue and whom they would serve with their skills. The process of becoming a teacher during apartheid was indicative of this. Teacher colleges trained teachers according to their respective races. The quality standards, resources and pedagogies all reflected the role of the specific races in society, and this was based on a stereotypical view of seemingly homogenous cohorts.

The post-apartheid dispensation sought to overhaul this discriminative provision of education by promoting democracy, citizenship, social cohesion, equity and equality through its newly developed policy provisions and legal mandates. A brief policy sociology of post-apartheid education policies demonstrates a sophisticated policy environment that seeks to address many of the social, economic and political inefficiencies instituted by previous political eras. Using a hermeneutical approach (Vieira & De Queiroz, 2017) to interpret the embedded values of selected education policies in South Africa, reveals several things. First, foundational policies, such as the National Education Policy Act (DOE, 1996) and the South African Schools Act (DOE, 1996), make evident the state’s commitment to equity, equality, respect, dignity and access to quality education. Second, the Minimum Requirements for Teacher Education Qualification (MRTEQ) (DHET, 2018) and the Integrated Strategic Planning Framework for Teacher Education and Development in SA (ISPFTED) (DBE & DHET, 2011) suggest that there is a commitment to ensure that teachers are sufficiently equipped with the necessary skills, knowledge and dispositions to create meaningful teaching and learning experiences in the classroom. Third, policies, such as the National School Safety Framework (Centre for Justice and Crime Prevention [CJCP], 2015), the Policy Framework for the Management of Drug

Abuse by Learners in Schools (DOE, 2002), the National Strategy on Screening, Identification, Assessment, and Support (SIAS) (DOE, 2008) demonstrate the state's commitment to ensuring learners are well supported and protected. And fourth, policies, such as the Minimum Norms and Standards for Public School Infrastructure (DBE, 2013), reveal the state's awareness of how context impacts teaching and learning and therefore require specific attention.

Whilst the policies discussed here are certainly not an exhaustive list of policies that impact the delivery of basic education in South Africa, these policies are sufficient to illuminate the suggested and, to some extent, assumed, lived experiences and working context of teachers in the country. It suggests that teachers should feel safe, should be consistently professionally developed through CPD, that teachers themselves should be lifelong learners and should be respected members of the community in which the school resides. Teachers, in the way they impart knowledge, should be inclusive in their approaches, should enact the values of citizenship, democracy and social cohesion and should be provided with the resources to support their core function of teaching. However, several recent studies in South Africa suggest that there is a disjuncture between what is articulated in policy and teachers' lived experiences within their school contexts (McDonald, 2021; Nakidien, Singh, & Sayed 2021; Singh, 2020). The lived experiences of teachers, as articulated in these studies, suggest that teachers' experiences of teaching and learning are suboptimal, disabling, humiliating and frustrating, particularly in rural contexts. Whilst recent policy developments, such as the draft Rural Education Policy (DBE, 2017), are currently being debated at national level (PMG, 2022), it may take years before finalisation and implementation, and for

teachers and learners to experience the benefits thereof, delaying social justice yet again.

3 DEFINING RURALITY AND RURAL SCHOOLS

Rurality could be defined in many ways, but the most helpful definition, and the one which underscores this paper, understands rural to be either a regional or a remote setting (RRR) as articulated by Ledger, Masinire, Diaz, and Burgess (2021). Some regions are characterised as rural through the dominant activities in the area, for example, agricultural pursuits such as farming. Other areas are characterised as rural based on their proximity to the main urban centres. Rural areas are usually characterised by high levels of poverty and inequality, and rural populations also have "... less access to education, health and other services" (United Nations Department of Economic and Social Affairs [UNDESA], 2021, p. 18). In South Africa in 2020, between 20% and 39% of South Africans lived in rural areas.

There is also a lack of consensus about what constitutes a rural school with a recent South African authority suggesting that rural schools can be "characterised by various forms of distance", "uniquely characterised by challenges" and "as hubs of learning and development for rural communities" (National Education Collaboration Trust, 2017, p. 186).

The way rural schools and rural education are defined in policies in South Africa incorporates a deficit approach. Rural schools are defined in opposition to urban schools. Thus, rural is described as that which is *not urban* (Rusznyak & Masinire, 2018). Ledger et al. (2021) note that "the foundation of deficit thinking about African education and rural education, in particular, was constructed and consolidated during the colonial/apartheid period prior to 1994 ...

[when] rural education was characterized by a rapid structural deterioration of predominantly Black schools and a segregated curriculum” (p. 12). Thus, current understandings and prevailing definitions of rural schools and rural education are still heavily influenced by the country’s political past. This is particularly evident in the fact that the previously categorised “homelands” or Bantustans remain classified as rural and remain some of the poorest and underdeveloped regions in the country. Thus, there remains a strong correlation between race and rurality in South Africa. The deficit approach to understanding rural schools perpetuates because, in reality, there are vast disparities between rural and urban schools in South Africa. For example, rural learners often have low school attendance as many of them are forced to work on farms, the curriculum is not relevant to their lives, they have to travel long distances to get to school, sometimes they have to live away from their families in boarding homes to attend school and teacher development in these contexts is often severely neglected (Du Plessis & Mestry, 2019).

4 TEACHING AND LEARNING IN RURAL CONTEXTS IN SOUTH AFRICA

Teaching has both cognitive and affective dimensions. Teachers, when in the classroom, do more than just deliver content. They impart values, develop relationships, and they mould future citizens. As such, teaching is a values-driven profession using content knowledge as its conduit.

In rural contexts, teachers must contend with insurmountable challenges as noted in a recent news headline about a high school in the Eastern Cape Province that listed overcrowded classrooms and a lack of ablution facilities as critical challenges as learners often relieve themselves in open

fields (Sizani, 2022). Further to this, a teacher at the school noted that

“... The lack of fences is another problem ... We don’t have air conditioners. All our electricity cables were stolen during December holidays. We don’t have toilets. The Department of Education only provided us with six toilets during the outbreak of the Covid-19. But, at the end of 2020, the toilets were removed because the service provider had not been paid ... Teachers, especially in grade 10, are always drained. We have 199 grade 10s, 70 grade 11s, and 65 grade 12s. We have a grade 10 class with 68 learners instead of 35 learners.”

The acting chairperson of the high school explained:

“We have a drugs and alcohol problem in this community. Most of the parents survive on social grants and some are seasonal workers at citrus farms. These appalling learning conditions make education look meaningless to our children. The department is dragging its feet in addressing this problem” (Sizani, 2022).

The case of Newton High School is not an isolated incident and is a case in point for most rural public schools. Thus, the experiences reported by the teacher in the quote above represent the lived experiences of many teachers who teach in rural contexts in South Africa (Du Plessis & Mestry, 2019). Whilst learners in rural areas are negatively impacted by their learning context, teachers equally shoulder some of these challenges. A study conducted by Du Plessis and Mestry (2019)

that investigated teachers' experiences of working in rural contexts reveals that teachers complained about curriculum challenges, poor facilities, and infrastructure, system and administrative problems. Due to the added challenges teachers in rural school contexts face, hiring and retaining suitably qualified teachers is very difficult because there are fewer financial resources available and often the teacher "at a basic level must be prepared to teach multiple grades or subjects, organise extra-curricular activities and adjust well to the environment and the community" (Du Plessis, 2014, p. 1111). Ledger et al. (2021) echo this sentiment and note that education in rural areas has low levels of accountability and that teachers, as well as school leadership, such as principals, receive very little support. Schools often hire unqualified or underqualified teachers to fill the shortage with disastrous consequences for learner performance and to address inequalities within rural contexts. However, whilst several studies illuminate the struggles of teachers, school management and learners in rural areas, very few discuss and suggest how a deep understanding of teachers' lived experiences can inform policies and interventions that seek to alleviate these well-documented tribulations (Du Plessis & Mestry, 2019; Khumalo & Mji, 2014; Masinire, 2015).

5 THEORETICAL FRAMING

Hermeneutics is the study of how we interpret and make sense of the world around us. Phenomenology, on the other hand, is the study of the lived experience. What makes hermeneutic phenomenology a rich discourse is that it is not just a research methodology, but "both a theoretical perspective and a methodology, a strategy or plan that lies behind the methods employed in a particular study" (Crotty, 1998 cited in Tan, Wilson, & Olver, 2009, p. 2). Thus, its uses are multiple and

enriching. The theoretical underpinning of this paper is based on Paul Ricoeur's variant of philosophical hermeneutics and (social) justice, situated within a phenomenological paradigm. Ricoeur argues that, for most of the twentieth century, justice has been neglected and, in the best interest of society, it should be aggressively pursued (Ricoeur, 2000). His work is driven by the desire to celebrate the narrative of the individual, not as a selfish and narcissistic endeavour, but to better understand what makes us human and to promote the power of selfhood. For Ricoeur, the lived experience is the most formidable form of knowledge. This study gives voice and power to the lived experience of teachers teaching in a marginalised rural school in the Western Cape Province of South Africa. Through the personal accounts of teachers' experiences of teaching and learning, the paper reveals how, despite policy changes and political reforms, the legacy of apartheid is cemented into the daily realities of teachers' work.

6 METHODOLOGY

The data discussed in this paper were drawn from a larger interpretivist project that investigated teachers' and learners' lived experiences of their teaching and learning environment at selected schools in the Western Cape Province with each school representing one case study (see Singh, 2020). Shellington High, the school discussed in this paper, was one of the case studies.

Shellington High, a quintile one, no-fee school, is the only high school situated in a small town located in the Karoo. Situated in the Cape Winelands district, it has been classified as rural due to its distance from the city and the fact that it is surrounded by farmlands. There are approximately 579 learners and 17 teachers at the school (Education Management

Information System [EMIS], 2020). The majority of learners and teachers self-identify as Coloured, with about 5% self-identifying as Black African. Afrikaans is the dominant home language of teachers and learners, and it is also the Language of Learning and Teaching (LOLT) at the school.

Purposive sampling was used in this study as the larger project had sampling parameters and needed to represent high schools that varied by quintile and location. For this reason, Shellington High fulfilled the requirement of a rural based, quintile one high school. These characteristics were based on the Western Cape Education Department's EMIS data categories and were not based solely on the researcher's judgement. Two teachers at the school were interviewed using semi-structured interviews. Teacher A (Bianca) is a female teacher who teaches Afrikaans and Life Orientation at the school and Teacher B (Brian) is a male science teacher who is also the school principal. The larger study, on which this paper is based, sampled eleven teachers, thus satisfying the requirements

for a phenomenological study as noted by Creswell (1998) and Morse (1994).

The data were analysed using thematic analysis underpinned by a phenomenological approach that ascertained teachers' lived experiences as they relate to teaching and learning, the school context and teachers' experiences of professional development opportunities. Interpretive phenomenological analysis (IPA) is a "qualitative approach which aims to provide detailed examinations of personal lived experience" (Smith & Osborn, 2015, p. 41). Further to this, these authors argue that IPA "produces an account of lived experience in its own terms rather than one prescribed by pre-existing theoretical preconceptions and it recognises that this is an interpretative endeavour as humans are sense-making organisms" (Smith & Osborn, 2015, p. 41). To establish validity and credibility in the analysis, Nizza, Farr and Smith's (2021) four markers to ensure high-quality IPA were incorporated as depicted in Table 1 below:

Quality indicator	Brief description
Constructing a compelling, unfolding narrative	The analysis tells a persuasive and coherent story. The narrative is built cumulatively through an unfolding analytic dialogue between carefully selected and interpreted extracts from participants.
Developing a vigorous experiential and/or existential account	Focus on the important experiential and/or existential meaning of participants' accounts gives depth to the analysis.
Close analytic reading of participants' words	Thorough analysis and interpretation of quoted material within the narrative helps give meaning to the data and the experience it describes.
Attending to convergence and divergence	Idiographic depth and systematic comparison between participants creates a dynamic interweaving of patterns of similarity and individual idiosyncrasy.

Table 1: The four quality indicators of good IPA (Nizza et al., 2021)

The data were translated from Afrikaans to English using the researcher's own knowledge of the language and verified through a bilingual Professional Learning Community (PLC). Ethical clearances for this study were obtained from the Western Cape Education

Department, institutionally, as well as the respondents themselves. Informed consent, the freedom to withdraw from the study at any time without prejudice, anonymity and the rights of respondents were discussed with all participants who participated in the study.

7 FINDINGS AND DISCUSSION

The interviews with Bianca and Brian revealed three dominant themes. The first relates to teachers' lived experiences of teaching and learning at a rural high school, the second relates to teachers' lived experiences of the school context and the third theme relates to teachers' lived experiences of teacher professional development opportunities.

7.1 Teacher's Lived Experiences of Teaching and Learning At A Rural High School

Teaching and learning, in this context, refer to how teachers engage with their learners and the process of how they deliver the curriculum. Bianca noted that she was not able to cover the full curriculum as many learners struggle to read and write. She separates learners into ability groups, as noted below:

"I don't get to everything because there are some of them [learners] that are behind and I don't want to go on because of the slow learners ... but what I do many times is to separate the stronger learners and those who are slow and who really can't read. Those learners I just put one side" (Bianca, Female High School Teacher).

Bianca also noted that Fetal Alcohol Syndrome (FAS) heavily impacts on teaching and learning at the school and noted that teachers are not trained sufficiently to help affected learners:

"Many of these children, as I saw later when they came from the primary school to Grade 8, there are many FAS cases, Fetal Alcohol Syndrome cases, ... So let me

say Grade 9. There are about 10 to 12 cases in a class ... a person tries to, but we really [are] not trained and we really do not know how to help these children ... so I try to adjust and help where I can" (Bianca, Teacher).

The historical legacy of payment with alcohol continues to plague South Africa, particularly in the Western Cape Province where this practice was most rife (May, Marais, & De Vries et al., 2019). Larkin (2014) notes that the effects of the *dop* system (tot system), continue to have adverse health and developmental effects, particularly among rural farming communities. Despite the practice of *alcohol for services* being abolished, "current prevalence of the *dop* system range from 2% to 20% of labour payments in the Western Cape" (Larkin, 2014, Para. 1). Further to this, South Africa also has the highest reported levels of Fetal Alcohol Syndrome in the world: between 29 and 290 per 1000 live births (Olivier, Curfs, & Viljoen, 2016). Bianca's experiences of teaching and learning in her class demonstrate that many learners in her class are not at the requisite level for their age due to their inability to read as well as other developmental challenges. Due to her lack of training to deal with these learners, they are "put one side" as she focuses on learners who can complete the tasks thus putting these already vulnerable and challenged learners at a double disadvantage. Bianca's experiences strongly suggest that the effects of apartheid and its accompanying social practices are still evident in the teaching and learning experiences of teachers and learners and that there seems to be very little evidence that these effects will soon dissipate.

Further to this, limited resources, such as a lack of textbooks and a functional library, and limited access to ICTs also

impact on teaching and learning:

“In Afrikaans [language class] there are only two classes that have textbooks ... we can’t give them homework most times or give them copies ... because many times we don’t have ink or paper at the school, so that has a negative impact on learners ... we can’t give homework or give the child a book to learn for the exams; everything must now take place in the classroom” (Bianca, Teacher).

With regards to access to ICTs, she adds,

“We don’t have a [working] computer room, so I can’t send my kids to the lab. There is a lab, but I don’t know what is wrong with it. No one uses it” (Bianca, Teacher).

Bianca notes that even the library is not optimal:

“The library is now open, so they can read during breaks ... but they can’t take the books home” (Bianca, Teacher).

Bianca is also concerned about the lack of resources to ensure adequate, quality teaching and learning. School libraries and learning support tools, such as access to ICTs, enhance learners’ ability to search and gather information related to their schoolwork and their daily lives. In South Africa, very few schools have functional libraries, most of which are situated in historically white, coloured and Indian communities and, in cases where they do exist in poor communities, they are dysfunctional (Mojapelo & Fourie, 2014; DBE, 2020). In rural areas, even fewer of

these libraries exist (Dube, 2020). The lack of resources, as Bianca illuminates, limits the teaching strategies she can use in her lessons.

Brian noted that the relationships between teachers and learners are poor and that this affects teaching and learning at the school, as noted below:

“At this stage, [the relationship] is not ideal ... there was an incident in the past where things happened and the relationships with teachers caused many problems. Parents still come to me and say because of this teacher or that teacher, our children left the school ... because of the comments and negative attitudes by teachers, the learners left the school. [It could be because] many of our teachers in our time were trained by an institution that was based on a certain race ... by the colleges or at the Tech” (Brian, School Principal).

Positive teacher-learner relationships ensure optimal learner performance and foster a healthy school environment. As Martin and Collie (2019) note in their empirical study of high school learners, positive teacher-learner relationships predict greater schooling engagement and subsequently learner performance. Brian’s experiences suggest that one of the reasons learners disengage from teachers and subsequently learning is due to their poor relationships with teachers to the extent where learners drop out of school. Further to this, Brian also noted that the teachers’ behaviours may be attributed to the way they had been trained. Teachers trained before 1994 may still be using pedagogies inconsistent with a democratic dispensation that reflect the apartheid

ideologies of separate development and differential treatment of learners by race. Gardiner (2008) notes that teacher training colleges during apartheid were of a poor quality and were underpinned by fundamental pedagogics, which promoted authoritative teaching and learning and discouraged the development of critical thinking.

The experiences of Bianca and Brian show that teaching and learning at the school are not optimal and that this negatively affects both learners and teachers. They also suggest that the historical legacy of apartheid still impacts teaching and learning within schools in rural contexts making it challenging to realise social justice.

7.2 Teacher's Lived Experiences of Their School Context

School context here refers to the school environment which is multidimensional in character. Cohen et al. (2009) note that school culture or climate refers to the "quality and character of school life ... patterns of people's experiences ... [including] goals, norms, values, interpersonal relationships" (p. 1). In South Africa, principals are charged with creating a conducive teaching and learning environment (Van Jaarsveld & Mentz, 2021). When Brian was asked to describe his experiences of the school context, he immediately began describing the community in which the school is situated, noting the challenge with drugs, violence, crime and gang activity::

"This is a very poor community ... people from outside come to sell drugs in the area and it causes a surge in crime. It has a negative impact on the discipline of learners and the safety of our school. We have had many break-ins at school and last quarter they

stole the computer's hard drive through the window. They broke into the classes ... then, also because we have no fencing, it allows free access for the gangsters. So, they can come to the school at any time and move around. Two or three times they came to school and smoked dagga [cannabis]... there are also some learners that are involved with the gangs" (Brian, School Principal).

Bianca's lived experiences of the school context echo those of Brian as she also notes that the community in which the school is situated has high levels of poverty, unemployment and regular drug activity and that teachers and learners do not feel safe at school:

"The unemployment rate is very high, about 80% I can say. So what happens, the people who are unemployed begin to steal and break in, just to put something on the table ... this has a negative impact on learners because they come to school hungry ... and you never know these things until you talk to them ... I can tell you they don't feel safe ... we don't have a fence, so what happens every day, you see strange faces, people that don't belong here ... drug dealers come to school dressed like school kids" (Bianca, Teacher).

The experiences of Brian and Bianca suggest that, to understand the school context, it is important to understand the community in which the school is situated and that the two are not mutually exclusive. Gardiner (2008) argues that if we are to have meaningful interactions with

rural communities, their concerns need to be addressed because they are preoccupied with trying to tend to their basic needs.

Rural neighbourhoods are plagued by poverty, inequality and unemployment which are persistently high, and limit their ability to thrive (Mbanda & Ncube, 2021). Instances of violence, drug abuse, hunger and safety remain pressing concerns for teachers at this school, particularly as it seems some learners may be participating in illegal activities.

7.3 Teacher's Lived Experience Of Professional Development Opportunities

The effects of teacher professional development on learner performance, teacher content, pedagogical content knowledge, and teacher confidence and competence to teach has been well documented (Singh, 2020; Sayed et al., 2018). Thus, consistent and regular professional development opportunities are essential to ameliorate some of the challenges experienced by teachers who teach in challenging rural contexts. Bianca's views are indicative of the experiences of teachers at the school. The feedback from Bianca suggests that teachers are not continuously and consistently provided with professional development opportunities and that development is sporadic as noted in the quote below:

"[This year] absolutely nothing ... [but] last year we had this training from WCED ... about wellness and it was here at school. They came to give us training about how to work with children who were abused. It was from the social worker ... It helped a little bit because the minute a child comes to you and tells you that he has been abused and you, as a teacher does not report it, you

are also considered guilty. So with every incident, we inform the social workers, who then come to the school ... but they don't come regularly ... I feel that here at the school, it shouldn't be necessary for us to keep calling them; there should come a time when they know they need to come. They know there are many learners with these types of problems, and they do have the case files. So, come to school, come find out how the learners are doing ... so we have to call them before they come and then it can take a day or two before they actually come to see you and [I would also like to receive training on] ... how to work with children who are slower ... because we didn't get training on how to teach these learners and it pains me to think that you can't do much about this because your time is so limited ..." (Bianca, Teacher).

Teachers in rural areas need access to context specific professional development that allows them to address the unique challenges they face, improve learner performance, teacher confidence and motivation and, more importantly, to elevate the quality of the education system (Ullman, 2010; Singh, 2020).

8 CONCLUSION AND RECOMMENDATIONS

Using a phenomenological approach, specifically Ricoeur's variant of philosophical hermeneutics and (social) justice, to understanding teachers' lived experiences of teaching and learning in a rural school in the Western Cape Province of South Africa, this paper argues that the South African government struggles to

provide good quality education to learners in poor rural schools and that teachers are not sufficiently supported. Through the voices of the teachers represented in this paper, we begin to understand, that the legacy of apartheid is so deeply woven into teachers' daily realities that the undoing of this legacy is seemingly impossible. More than 25 years after ushering in a new democratic dispensation and after the development of numerous policies that promote the values of democracy in and through education, teachers' and learners' lived experiences in rural areas demonstrate how fundamental human rights are violated every day and social justice is eluded. The goal of social justice is to ensure "full and equitable participation from all social identity groups in society that is mutually shaped to meet their needs" (Bell, 2016, p. 26). Thus, a recommendation to address the specific challenges faced by rural schools is to gain further insight into their lived experiences, to better inform interventions. Phenomenological research is well placed to provide this platform as the conduit to understanding the intersection between race, rurality and inequality in education so that future policy provisions aimed at improvement could be more effective and sustainable. Phenomenological research and hermeneutical endeavours allow for research respondents to become co-constructors of knowledge and this allows these respondents to inform the policies that aim to regulate their lives. This emancipatory approach gives voice to previously silenced cohorts and empowers the disempowered through active participation. Although phenomenological research is often critiqued for being self-indulgent, this is certainly not the case. Instead, by understanding the lived experiences of a few, it can provide social justice and quality education to the many.

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CPD and The Development of Teacher TPACK For Technology Integration: A Hermeneutic Phenomenological Study

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ABSTRACT

This paper explores the role of Continuous Professional Development (CPD) in developing teachers' competence in integrating technology into their practice to better understand the provision of equitable and quality teaching and learning. Employing a phenomenological research paradigm, underpinned by a hermeneutic phenomenological methodological research design, data was collected from a purposive sample of 10 primary school teachers in the Western Cape. Narrative and semi-structured interviews provided a rich and textured account of the diverse ways in which teachers' competence in technology integration was developed by CPD. The data explication process applied, suggests that teaching and learning resources were important factors in which CPD model participants were selected. However, teacher agency exercised within structural and cultural conditions significantly shaped the effective integration of technology in the diverse classroom context. This paper provides a more nuanced understanding of the relationship between teacher context and CPD's effect on Technological Pedagogical and Content Knowledge.

Keywords: Continuous Professional Development, Technology Integration, Phenomenology, Hermeneutic, TPACK

1 INTRODUCTION

Technological innovation tends to place new professional demands on future citizens. Graduates entering a world transformed by technology require the education sector to respond to the need for innovative technology integration (Xing & Marwala, 2017). Butler-Adam (2018) predicted that educators will be challenged to prepare citizens for the exponential growth of new technology. Over the past decade, the importance placed on technology in education has grown significantly, focusing on two aspects (Hew, Lan, Tang, Jia & Lo, 2019). Firstly, technology integration is integral for education to remain relevant. This promotes the case for integrating

technology throughout teacher education, based on the premise that teachers' knowledge must include the integration of technology into their practice (Redmond & Peled, 2019). In support, in the second aspect researchers suggest that teachers are vital in technology integration. Jan (2017) and Butler-Adam (2018) underscore that the ability to use new technology is in society increasing, implicating education in addressing the demand through teaching, learning, and curriculum change.

2 BACKGROUND

Elbaz (2018) emphasised the interconnected link between teacher practice, learning and curriculum development, supported by Taylor, Carlson, Gardner,

Wilson and Stuhlsatz (2019) who motivate that teacher practice is fundamental to learner achievement and curriculum change. This supports Jan's (2017) earlier motivation for teacher professional development programs to address the demands of an increase of integrating technology into teacher practice, on the notion that teachers are vital to technology integration in education.

Jan's (2017) notion leads to the last focal aspect in research which suggests that it is necessary for Continuous Professional Development (CPD) to develop teachers' competence in integrating technology into their practice. Redmond and Peled (2019) accentuate that technology has yet to be harnessed globally in teacher practice, attributing this to teachers' inability to contextually integrate technology into education. Consequently, integrating technology is dependent on teachers' Technological, Pedagogical and Content Knowledge (TPACK) (Krauskopf & Forssell, 2018). If we are to accept that technology integration in education is critical to empowering future citizens, the adequate preparation of teachers to integrate technology into their practice is critical (Drummond and Sweeny, 2017). Teachers' inability to take advantage of society's saturation of technology is depicted in Moreno, Cabero-Almenanra and Almargo's (2019) study of in-service teachers. This study concluded that increased integration of teachers' TPACK was present after receiving CPD. The development of TPACK for improving technology integration into teacher practice has received much attention in research emphasising the CPD of teachers TPACK (Mishra & Kohler, 2006; Drummond & Sweeny, 2017; Mutereko, 2019).

3 RESEARCH AIM

This study is motivated by the aspects addressed in literature where the emphasis is placed on technology integration in education, teachers' vital role, and the need for CPD to develop teachers' competence for integrating

technology into their practice. The purpose of this phenomenological study, therefore, is to provide contextual insight into the role of CPD in developing teachers' competence in integrating technology into their teaching.

4 RESEARCH QUESTIONS

To address the aim, this study is guided by the following research questions:

1. *How do different CPD models develop teachers' competence in integrating technology into their practice and*
2. *How do contextual factors influence CPD in developing teacher competence in integrating technology into their practice?*

5 LITERATURE REVIEW

Continuous contextual changes and innovations in education require teachers' engagement in lifelong professional development referred to as Continuous Professional Development (CPD) (Louws, Meirink, van Veen & van Driel, 2017; Bernadine, 2019). In short, CPD is described as a way of capacitating employees on the premise that teacher compliance does not impact public service delivery without competency (Mutereko, 2019).

CPD is critical to developing and refreshing teachers' quality of practice and learner achievement (Erdaş Kartal, Dogan, Irez, Cakmakci, & Yalaki, 2019). There is a global call for prioritizing in-service CPD in education, especially those involving technology (Bernadine, 2019; Mutereko, 2019). The United Nations Educational, Scientific, and Cultural Organisation (2016, p. 38) calls for teachers to be provided with regular CPD opportunities, stating that "technology could be deployed to improve access to education for disadvantaged communities, to support professional development...". The recommendation that integrating technology into teacher practice should be a goal of current CPD is made in

much-related literature due to the contextual impact of the pace in technological innovation (Louws et al., 2017; Dlamini & Mbatha, 2018). Local studies of teachers' CPD support its role in improving South African education and influencing teacher practice, linking CPD, technology integration and the consideration of contextual demands (Christiansen & Bertram, 2019).

In line with the national strategy to improve education through enhancing teacher practice, the Integrated Strategic Planning Framework for Teacher Education and Development in South Africa (ISPFTED) 2011 - 2025 mandated SACE to implement, manage, and quality assure CPD (DBE & DHET, 2011). The ISPFTED 2011 – 2025, and Teacher Professional Development Master Plan 2017 – 2022 provide details of the provision of South African CPD. These documents give details of the CPD models provided by the Department of Basic Education (DoBE), four of which can be classified into the following models of Kennedy (2005):

1. **Training Model:** Arguably the dominant model used, employing a skills-based technocratic view where CPD is delivered to teachers by an expert, commonly off-site.

2. **Award-Baring Model:** Like the training model, however, the CPD is validated, and the participant is awarded documented proof of completing the training.

3. **Mentoring Model:** A variety of CPD practices are encompassed by this model, all defined by the relationship between two teachers; the mentor is the one providing the CPD.

4. **Community of Practice (CoP) Model:** Colleagues participating in a learning community to provide CPD. Kennedy (2005) closely relates the Me and CoP models, stating that in

some literature the two only differ in the confidentiality of the members'¹ interactions.

South Africa's CPD programmes followed the provision of the models outlined in the aforementioned documents receiving large investments, however, teachers were reported to be left with persisting incompetencies (Dlamini & Mbatha, 2018). Kimathi and Rusznyak (2018) noted SACE's little success in their CPD mandate, attributing it to variations in contextual settings, suggesting that in-service CPD must be aligned with current trends in contextual change and teacher development goals (Louws et al, 2017, Kimathi & Rusznyak, 2018). Three internationally influential trends can be identified in the South African approach to teacher CPD. The first is that CPD is the duty of the professional, registered under a professional licensing authority. The second is the imposition of CPD by national or provincial authorities, which was evident during the South African curriculum changes. The third is in the framing of CPD in the role of research, policy, and practice reform implementation, which has also been used historically in South Africa (Guldenhuys & Oosthuizen, 2015; Bernadine, 2019). Internationally all three trends met with success and challenges. South Africa faced many challenges in implementing CPD in these trends due to vast variations of contextual inequalities, receiving criticism for limited provision of long-term contextually aware CPD opportunities (Kimathi & Rusznyak, 2018; Bernadine, 2019).

Despite significant investments in technology integration in South Africa, inequities in teacher competency persist. Research urges that CPD is integral to teachers' technology integration into their practice (Dlamini & Mbatha, 2018; Baran, 2018). Contextual factors pose a challenge to CPD efficacy and a challenge of the

¹ Member(s) referring to participants in the CPD models.

trends in South African CPD provision. Louws et al. (2017) warn that the efficacy of CPD relies on alignment to teacher contextual needs supporting this claim in research done by Borko, Jacobs and Koellner (2010), Little (2012), Webster-Write (2009) and Van Veen, Zwart and Meirink (2012). Louws et al. (2017) suggest that (1) CPD is principally influenced by school context, (2) context determined the CPD opportunities afforded to teachers, and (3) teacher initiative towards their CPD is partial to their context. Edras Kartal et al. (2019) described effective CPD as being able to make provision for teacher's learning to be a process of meaningful interactions between teachers and context, characterising context as a highly important CPD component. Bernadine (2019) states that CPD policy design is dependent on context, recommending that contextual factors be considered for CPD improvement. This study locates itself within the recommendation of multiple studies in the field of CPD and technology integration suggesting the need for insight to be gained into technology integration, CPD and context. This motivates the aim of this study, to address the need to provide contextual insight into the role of CPD in developing teachers' competence in integrating technology into their practice. Being aware that the meaning of context differs frequently in multiple studies, this study, based on the work of Dey (2001) and Briand, Bianculli, Nejati, Pastore and Sabetzadeh (2017), defines context as *human* (beliefs, background, motivation), *organisational* (limitations of resources and time), and *domain-related* (level of compliance with professional standards) factors which are evident to be of interest in participants lived experiences related to their professional identities.

Technological Pedagogical and Content Knowledge (TPACK)

The TPACK framework of Mishro and Koehler (2006), describes the

knowledge teachers need in order to integrate technology efficiently into their practice, building on the work of Shulman (2005). TPACK, uses three founding perspectives,

1. **Technological knowledge (TK):** knowledge of various technologies available and characteristics thereof

2. **Content Knowledge (CK):** Knowledge related to concepts and theories of a discipline, or subject,

3. **Pedagogical knowledge (PK):** Knowledge of the teaching theories and strategies related to the discipline.

The combination of these three founding perspectives is referred to as intermediate TPACK perspectives, namely:

4. **Technological Pedagogical Knowledge (TPK):** Knowledge of the benefits and disadvantages of technologies for specific pedagogical practices.

5. **Pedagogical Content Knowledge (PCK):** Knowledge of applying relevant teaching theories and strategies to teaching the discipline, or subject.

6. **Technological Content Knowledge (TCK):** Knowledge of the use of relevant technology in teaching specific discipline content.

TPACK, therefore, is defined as the knowledge of how to integrate appropriate technology with relevant pedagogical approaches to teach the content of disciplines (Valtonen, Sointu, Kukkonen, Mäkitalo, Hoang, Häkkinen, Järvelä, Virtanen, Pöntinen, Kostianinen. & Tondeur, 2019). TPACK served as a theoretical framework for this study, providing a theoretical lens to search for insight into how different CPD models develop teachers' competence in integrating technology into their practice. Chai (2019, p. 6) states that "it is now

commonly accepted that teachers need to develop TPACK to integrate technology...”, supporting the notion that TPACK provides insight into teacher knowledge of technology integration and their pedagogical and content knowledge influencing their practice (Valtonen et al., 2019)

6 METHODOLOGY

This study positions itself within the phenomenological research paradigm to describe participants’ lived experiences, drawing out the meaning of a phenomenon (Neubauer, Witkop & Varpio, 2019). The researcher bracketing their presumptions is key to Husserl’s (1964) phenomenology, allowing an unbiased view of participants’ experiences. Bracketing is often rejected by divergent methodologies of phenomenology, therefore, a phenomenological study must orient itself with one of the phenomenological schools (Gill, 2020).

Two main schools are associated with phenomenological research: hermeneutic and transcendental. In Husserl’s (1964) transcendental, the researcher as an observer can transcend the phenomenon under study to assume an overarching view of the phenomenon’s essence (de Zengotita, 2019). Phenomenologists who follow the school of Heidegger’s (1889 – 1976) hermeneutic phenomenology often criticise transcendental phenomenology, arguing that the researcher inevitably has an impact on the research and cannot fully separate their subjectiveness (Gill, 2020). Hermeneutic phenomenology moves beyond using participants’ lived experiences to describe the phenomenon, interpreting the context that underpins the experiences (Sloan & Bowe, 2014). As this study was concerned with the contexts of the participant’s experiences, hermeneutic phenomenology was the school of choice. This is supported by van Manen (1990) who credits the application of hermeneutic phenomenology in studies related to education through

interpretations of a deeper relationship between a broader range of contexts and lived experiences (Sloan & Bowe, 2014).

Hermeneutic Phenomenology

Van Manen (1990, p. 37) describes lived experiences as being an element of “a system of contextually related experiences”, and later states that to study lived experiences is to know the world in which the participant exists: “to know the world is profoundly to be in the world in a certain way, the act of researching – questioning – theorizing is the intentional act of attaching ourselves to the world, to become fully part of it, or better, to become the world” (Van Manen, 2010, p. 5). Wai Sum and Shi (2016) used hermeneutic phenomenology to explore the lived experiences of Physical Education teachers to gain insight into their lived world to produce rich descriptions of contextual factors that influenced their professional development. Similarly, Chan, Walker and Gleaves (2015) were guided by a hermeneutic phenomenological design to describe the diverse contexts of their participants, crediting it with allowing them to uncover the uniqueness of the individuals’ experiences, emphasising their context. Guided by a hermeneutic phenomenological design, this study explored participants’ lived experiences to gain insight into their context.

Trustworthiness and Ethical Considerations

Researcher subjectivity plays a key role in hermeneutic phenomenology, but there is a need for the researcher to be self-aware of their own subjectivity to be conscious of how it would impact the study (Gill, 2020; Chan et al., 2015). In this study, it was important for the researcher to recognise and acknowledge preconceptions that could influence the interpretations of the participants’ lived experiences. It was also important to not “step outside of the

moral values” of ethical research considerations, remaining mindful of how the research could affect the participants (Van Manen, 2015, p. 2). Therefore, an assessment of possible risks and harms of the research was done beforehand through obtaining ethical clearance from the institute that the researcher is affiliated with (Yin, 2011). All participants were made aware of the aim and questions of the study and were allowed to peruse the research proposal before participating. Member checking was practised during the research period where participants were asked to check for inaccuracies in the researcher’s analysis of interview data and field notes taken during interviews. This assisted in combating researcher subjectivity (Sum & Shi, 2016). The application of Licon and Guba’s (1985) methods for trustworthiness has been beneficial in hermeneutic phenomenology for addressing subjectivity (Noble & Smith, 2015). Applying this

method, this research addressed the: *truth value* by providing evidence of participants’ verbatim statements when presenting the findings, *consistency* in keeping a comprehensive record of data, *neutrality* in the aforementioned steps of reflexivity, and *generalisability* in the detailed discussion of sampling, data collection, and data analysis procedures which follow (Noble & Smith, 2015).

Participant Selection: Sampling

This study aimed to provide contextual insight; therefore purposive sampling was used to select ten participants who would enable the researcher to explore the lived experiences of individuals from a variety of contextual factors (Maxwell, 2012). Table 1 below provides a visualisation of the criterion used to purposefully select participants for this study.

Pseudonym	Gender	Age	Self-perceived technological competence	School resources in technology	Learners’ household income bracket
Holly	F	52	Low-Mid	Mid	Mid
Rudy	M	52	Low	Low	Low
Gary	M	46	Mid	Mid-High	Mid-High
Mary	F	41	Mid-high	Mid	Mid
Dave	M	35	Mid	Low	Low
Zoe	F	35	Low-Mid	Low	Low
Maggie	F	30	Low-Mid	Mid	Mid
Rob	M	29	Low	Mid -High	Mid
Katy	F	23	Mid	Low-Mid	Low-Mid
Lisa	F	21	Mid-High	Low-Mid	Low-Mid

Table 1: Criterion for participant selection

Data collection

Data was collected through two interviews with each participant. The first was a narrative interview. This type of interview is described as a story of unfolding events and was only structured by the researcher asking the participant to describe their professional journey with CPD that was related to the development of their competence in integrating technology into their practice (Stuckey, 2013). The researcher took field notes and asked questions where needed to keep the participants’ narration of their journey with

CPD relevant to the research aim. Participants were provided with an opportunity to member-check the field notes at the end of the narrative interview. Semi-structured interviews were then used as follow-up interviews for each participant. These interviews are often used as a follow-up to other data collection instruments and are often used in hermeneutic phenomenology (Noon, 2018). The semi-structured interviews allowed the researcher to ask questions related to the data collected in the narrative interviews. Participants had the opportunity to check the initial analysis of the data collected in the narrative

interviews, and the researcher was able to question the participants to gain further insight into questions that arose during the initial analysis. All interviews were audio recorded and verbatim transcriptions were used in the presentation of findings, which is important in the interpretation of lived experiences in hermeneutic phenomenology for developing a written statement (Gadamer; 2004; Van Manen, 1997; Sloan & Bowe, 2014).

Data explication framework: Analysis

Hermeneutic phenomenology receives critique for the ambiguity and non-standardised approach to data analysis (Gill, 2020). Noting this critique, this study both follows the tradition of flexibility and language emphasis of hermeneutic phenomenology, while embracing an Interpretive Phenomenological Analysis (IPA) framework to guide the process. IPA is often criticised for the limited role of language placed in data analysis, therefore being guided by Van Manen (1990) and Gadamer (2004) in the selection of which steps of the various IPA methods to select, supported the framework used in this study to utilise the strengths of both IPA and hermeneutic phenomenology (Noon, 2018). The following steps provide an explication of the data analysis framework:

1. **Immersion:** Usually done by reading and-re-reading transcriptions to immerse oneself in the participants' descriptions. The researcher found it easier to practice immersion by listening to the audio recordings multiple times.

2. **Noting:** Making notes of the participants descriptions that will allow the identification of emergent themes.

3. **Developing themes and connections:** connections between emergent themes are made to develop more established ones. The IPA techniques of *abstraction*, *polarisation*, *contextualization* and *function* were practiced in this step.

4. **Circle of reflexivity:** The researcher practices reflexivity and takes note of possible subjectivity, circling back to steps 1, 2 and 3. Member checking by participants was used to assist. This step enabled the researcher to deeper explore the lived experiences of the participants' which were related to the emergent themes in search of the essence of the lived experiences.

5. **Writing a statement:** After themes have been fully established, a written statement is produced using verbatim examples of participants' descriptions to illustrate the themes (Van Manen, 2007; Noon 2018).

The theoretical framework of TPACK (Mishro & Koehler, 2006), the contextual factors derived from Dey (2001) and Briand et al (2017), and the CPD model definitions (Kenny, 2002) were used as a lens to aid data analysis. Table 2 below shows an example of the application of the data analysis process in this study, and Table 3 provides the coding that was used in this study.

Participant description (Verbatim)	CPD model	TPACK	Context factor	Emergent Theme	Essence
Rob ...yes, so what I normally, um, look for is where I can learn the skills I need to know the different types of technology. You know I don't know I always struggle with using these things, I want to learn about how to use them myself...	TR	TK	HU	Selection of CPD models	Agency: Rob's self-perceived level of competence in technology integration influenced his CPD model selection

Table 2: Example of data analysis process

CODE	DESCRIPTION		CODE	DESCRIPTION
TK	Technical Knowledge		TR	Training CPD
TCK	Technical Content Knowledge		AB	Award-Baring CPD
TPK	Technological Pedagogical Knowledge		ME	Mentoring CPD
TCPK	Combination of TCK and TPK		COP	Community of Practice CPD
HU	Human contextual factors (beliefs, background, motivation)			
OR	Organisational contextual factors (limitations of resources and time)			
DR	Domain-Related contextual factors (compliance with professional standards)			

Table 3: Coding used in this study

7 FINDINGS AND DISCUSSION

The purpose of this study was to provide contextual insight into the role of CPD in developing teachers' competence in integrating technology in their teaching. Two research questions were used to guide this study in its aim: (1) *How does different models of CPD develop teachers' competence in integrating technology into their practice* and (2) *How does contextual factors influence CPD in developing teacher competence in integrating technology into their practice?* The application of the data analysis framework illustrated in Table 2 was beneficial to the development of themes in the data which addressed these research questions, assisting in the formulation of a written statement to present these themes in addressing the research aim.

7.1 How does different CPD models develop teachers' competence in integrating technology into their practice?

The association between different aspects of TPACK, different CPD models and specificity in the development of technology integration was evident in the emergent themes identified in the participants' experiences. It was firstly suggested that specific TPACK perspectives were more influential in developing teachers' technological integration. Participants described that TK

in isolation was not sufficient in developing their technology integration.

Dave: *...when we wanted to use this (Programme's name)... we worked on ways to get through to them. So, it's like (pause) we, I know how to teach with it but together we work on the didactics of teaching using the computer, I mean the new, um, technology...*

In this description, Dave described a moment when he admitted to having TK, but needed to develop his TPCK to integrate the technology into his practice. This was commonly described in the data collected:

Katy: *I asked her to show me how it works when I want to do the shapes lessons because I did not understand that part in the training...*

Here, Katy also used ME to develop her TPCK to integrate technology into her practice. Similarly, Mary engaged with COP to develop TPCK for similar purposes:

Mary: *It was really just us working together to see how to use it in our lessons and teaching...*

These participants' descriptions not only correspond with Patton and Parker's (2017) signature pedagogy but also corresponds to the study of van As (2018) who links the development of discipline knowledge (CK) and instructional

methodology (PK) with teachers' development of new and existing skills in their practice. Elbaz (2018) also placed Shulman's PCK at the centre of teacher practice which is supported by Barendsen and Henze (2019) stating that teacher classroom practice needs to be informed by addressing multiple elements of PCK. Emphasis is placed on the COP and ME models for their development of Teacher PCK (Wenger, 2000; Mupepi, 2021). The consensus is that these two models are powerful locations for developing PCK through collaboration and learning through practice (Boreham, 2000; Patton & Parker, 2017). Participants' descriptions in this study support this, making connections between COP and ME models with the development of TPCK.

Gary: ... *we still work together when we try new things, especially the technology integration and see how to use it to teach the subjects.*

Here Gary describes how he participated in COP to develop not only his TPK but also his TCK. Rob and Holly also describe the development of elements of TPCK in ME and COP models, respectively:

Rob: *she is always ok to show me how to teach any subject,... will give me tips on how to teach the work using, like, a projector or laptop or other digital technology.*

Holly: ... *for all the years I've worked like this with my colleagues where we will share what works with our classes, it's the same now with Teams.*

Contrary to this, participants' descriptions suggested a connection between TK with TR and AB models.

Katy: *So, we only covered things like how to work it, how it connects to the laptop, how we can use the laptop to type on it and it will immediately go through to the interactive whiteboard...*

In the above description, Katy described developing her knowledge of TK in TR she had received. Similarly, Mary and Rudy describe their participation in AB and TR, respectively, where they also reported developing their TK.

Mary: ... *they showed us how to use Kahoot and other apps but there was not really time given to showing us how to use it in teaching.*

Rudy: *Um, so yah, like I said we went to the training, and they were teaching us how to use the (Programme Name) and what we need to do as teachers, how to log in, how to view the children's results.*

Rose and Reynolds (2006) agree, stating that TR and AB models are methods of passive knowledge transmission, echoing Kennedy (2005) who credited them with the type of knowledge development synonymous with TK. Almari, Aldahmash and Alsharif (2018) also describe the top-down, hierarchical approach of these models which do not influence teacher real-world practice. Therefore, in addressing the question: *how do different CPD models develop teachers' competence in integrating technology into their practice*, the findings of this research suggest that (1) developing teacher TPCK will influence the development of their competence in integrating technology into their practice, and (2) ME and COP models are effective in TPCK development.

7.2 How does contextual factors influence CPD in developing teacher competence in integrating technology into their practice?

The findings described two primary contextual factors which influenced CPD in developing teacher competence for integrating technology into their practice. Firstly, participants described being influenced by OR factors of school resources in their choice of CPD.

Zoe describes why she often chose the AB: *I went because I wanted to learn*

how to use this ... I wanted to listen and bring it back into my classroom... to see what's gonna make me work smarter. And, you know, and, what's going to advantage these children more than anything.

Gary describes a self-initiated COP: *...created a group for us on teams so that we could work together on how to teach our classes online... this session was good because we got a chance to look at strategies on how we were going to teach the learners online...*

Participants who described their schools as being low-resourced mostly chose TR and AB as seen in Zoe's description, whereas participants who described their schools as med-high-resourced participated mostly in ME and COP as seen in Gary's description. Almusawi Durugbo and Bugawa (2021, p. 4) state that "organisational factors play a critical role in the emergence and sustainability of technological innovations", however, this was not the most influential contextual factor evident in the findings of this study. HU factors were more influential in teachers' selection of CPD model.

Rob (describing why he chooses TR): *...yes, so what I normally, um, look for is where I can learn the skills I need to know the different types of technology. You know I don't know I always struggle with using these things, I want to learn about how to use them myself...*

Participants who described themselves as having low technological competence mostly selected TR and AB models. Rob's explanation of needing to learn how to use the technology (TK) is indicative to participants' descriptions. Participants who believed they had mid-high technology competence mostly participated in ME and COP to develop what Mary referred to as "...to see how to use it in our lessons and teaching...". This can also be seen in Gary's description:

Gary (describing why he chooses COP): *We all have different strengths in using IT (Technology), I personally know a bit more than the others... we still need to work together to see how we can use it in the planning for the subjects. (Pause) And what lessons will work better with the things like a projector or video or game, um, online quiz or ...*

Participants' perception of their competence in technology was the most influential contextual factor in their choice of CPD model. Addressing the first research question the association between specific CPD models that develop TPACK were most influential in the development of teacher competence in technology integration. This suggests that participants' perception of their competence was most influential in the development of their competence in technology integration. Durak (2019) supports this, stating that self-efficacy of technology integration is the most significant variable to TPACK development, linking achievement in technology integration to teacher beliefs. Leijen, Pedaste, and Lepp's (2020) adaptation of Priestley, Biesta & Robinson's (2015) model of agency depict the suggestion of participants, linking teacher perspectives of professional competence and professional purpose with their practice. This is supported by Imants and Ven der Wal (2020) place emphasis on the generation of self-validating environmental knowledge on teacher agency.

8 CONCLUSION

Increased importance has been placed on technology integration in education over the past decade (Hew et al., 2019). This paper, therefore, provides insight into the role of CPD in developing teachers' competence in integrating technology into their practice guided by hermeneutic phenomenology. Following the traditions of both hermeneutic phenomenology and IPA, this study used a

five-step data analysis framework that emphasised language (Gill, 2020; Van Manen 1990). A discussion of themes which emerged from that data produced a twofold written statement describing the essence of the phenomenon. Firstly, TPACK was used as a theoretical lens, which revealed that different CPD models developed different perspectives of teachers' TPACK. COP and mentoring which promoted TPACK were more influential in developing teachers' competence in integrating technology (Boreham, 2000; Patton & Parker, 2017). Secondly, contextual factors of Organisational (resources) and human (beliefs) influenced participants' choice of CPD. It was evident that human contextual factors were the most influential factor in participants' choice of CPD. This contextual factor suggested that teacher agency within the structural and cultural conditions was significant in motivating their selection CPD models that were more influential (Leijen et al., 2020). It can therefore be deduced that insight gained into the role of CPD in developing teachers' competence in integrating technology into their practice suggested (1) Mentoring and COP models of CPD were more successful at developing teacher TPACK which developed teachers' integration of technology into their practice, however, (2) teachers' selection of CPD models, guided by teacher agency, was more influential at hindering or promoting TPACK development.

9 LIMITATIONS AND RECOMMENDATIONS

Despite this study being conducted during the COVID-19 pandemic, the focus was not solely on CPD for technology integration that teachers participated in during the pandemic. The data did suggest that despite an increase in the demand for such CPD during the pandemic, overall emergent themes and suggestions remained consistent. The participants of the study, although selected for contextual diversity

were all primary school teachers in the Western Cape, South Africa, limiting transferability.

The data collected recommends further research into what mechanisms of CPD models lead to the development of specific teacher TPACK. Further research into how changes in teacher agency could affect CPD for developing teacher integration of technology is also recommended.

Lastly, the data analysis framework application combination of hermeneutic phenomenology, IPA and TPACK theoretical lens was beneficial in this study. Recommendations for further application and development of this analytical framework for related studies is suggested.

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Economics Student Teachers' Experiences-as-Lived in a Flipped Pedagogical Approach During Crisis Times

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ABSTRACT

Scholars of teacher education had been reported phenomenology both as a philosophical and methodological construct in reporting students' experiences of learning. In recent decades, research studies on the flipped-class pedagogy strategy have shown that it has significant educational benefits for student learning across subjects and contexts. This research explores, describes, and gains insights into student teachers' experiences as lived during an online teaching course at an open distance e-learning (ODEL) university. An interpretive phenomenological lens was employed using virtual videoconferencing to collect data. A purposive sample of Bachelor of Education (BEd) and Postgraduate Certificate of Education (PGCE) student teachers were selected. This study contributes to the literature on pedagogical dimensions that drives the functionality of flipped learning in an ODeL context. Furthermore, this exploratory study contributes to the practical implementation of flipped learning. Future research may extend the inquiry to other pedagogical dimensions by examining the effect of motivational factors for example the self-efficacy of student teachers.

Keywords Phenomenology, Flipped Pedagogy, Pedagogical Dimensions, Interpretive Phenomenological Analysis, Semi-Structured Interviews

1 INTRODUCTION

The global pandemic had impacted cross-border movements and in the case of South Africa, the government was forced to implement the Disaster Management Act (Republic of South Africa, 2002; 2020) to stop the spread of the virus. Therefore, a national state of disaster was declared to "flatten curve" and the spread of the virus (Koekemoer, De Beer, Govender & Brouwers, 2021). The strict COVID-19 lockdown regulations and protocols had affected the delivery of academic programmes at South African institutions of higher learning. Concerning this study, the author had to follow the revised academic plans and operations (2020-2021) issued by the university's management. To achieve the objectives of the course, the author had to recover "the lost time" by completing the

fully online *Teaching Economics* course (12 credits) within a shorter period. Based on this scenario, the author had to increase support to students for "catch-up on lost teaching time". On the module site, frequent announcements and discussion forum questions were posted for self-study. Specific topics from the five learning units were identified and the self-generated videos, recorded MS Teams sessions, selected articles on flipped learning and voice-over PowerPoint presentations were uploaded to assist in completing the required formative assessment activities and preparing for the online summative assessment. All pre-recorded flipped learning sessions on the Moodle learning management system (LMS) were rescheduled to accommodate students and ensure that the course content could be covered in the available time. Based on the mode of course delivery, the revised course

teaching plan had to be accelerated the online facilitation sessions using the virtual Microsoft Teams videoconferencing platform. The intention was to plan more flexible learning spaces that focused on student-centered online classroom teaching methods to promote discovery learning and active participative learning (Milman, 2012; Larcara, 2015). Based on the plethora of evidence reported on flipped learning, the intention is not to define flipped learning but to contextualize this phenomenon as a student teacher-autonomy strategy that promotes self-directed learning, flexible online spaces of learning, creates ample opportunities for active engagement, and provides constructive feedback on assessment activities by the lecturer in an online Moodle LMS. This study is foregrounded on both Edmund Husserl's (1977) seminal text as the early phenomenologist theorist and other African scholars who had published a considerable amount of literature on phenomenology as a philosophy and a theory of practice (Maxine Greene, 1971; Madeleine Grumet, 1987; Max van Manen, 1997; Tetsuo Aoki, 1992; Martin Heidegger, 2010; William Pinar, 2012; Oscar Koopman, 2013; 2016; 2018). These theorists had expanded on Husserl's seminal work, for example from an African perspective, Oscar Koopman's (2018) research focus on the theorization and practical application of phenomenology in science education. Based on the plethora of scholarly publications, cited phenomenology as a philosophical and methodological dimension in reporting students and lecturers' lived experiences in special education (McPhail, 1995); academic literacy skills (Thomson, 2008; Sloan & Bowe, 2014); science education (Koopman, 2013); accounting education (Koopman, 2018) and lecturers experiences in curriculum design (Qutoshi, 2018). Moreover, in recent times, it has emerged as an important area of investigation in teacher education (Koopman, 2016; Koopman, Le Grange & De Mink, 2016; Lewis, 2018; Koopman, 2017; Subramaniam, 2022).

In recent decades, research studies on the flipped-class pedagogy strategy have shown that it has significant benefits for student learning across subjects and contexts (Presti, 2016; Lin, & Hwang, 2018; Koh, 2019; van Wyk, 2020; Alajlan, 2022; Liu & Zhang, 2022; Sanders, Keegan, Culshaw & Tomes, 2022). But, no study could be found that employed a phenomenological lens to investigate the impact of online flipped pedagogy focus on student teachers' experiences-as-lived during times of crisis. After an extensive literature review, a study by van Wyk (2020) focuses on economics education and reported several pedagogical dimensions that emerged from an online flip-instructional design applied in an open distance learning context. This prompted the author to use phenomenology as a research method to explore, describe and gain insights into student teachers' experiences-as-lived and consciousness in an online course, *Teaching Economics*. The reason why I used phenomenology as a methodological lens is to explore student teachers' interactions and consciousness as lived experiences in an online flipped pedagogical strategy based on the phenomenological attributes of perception, imagination, awareness, emotion, desire, and social activity in the course. The study has implications for providing students with learning opportunities as it included designing a flipped pedagogical experience that would assist students in becoming professional economics teachers. Based on this view, an important question is raised: From an interpretive phenomenological viewpoint, how do Economics student teachers experience the pedagogical dimensions that emerged as drivers of flipped pedagogy during the COVID-19 crisis?

2 LITERATURE REVIEW

2.1 Phenomenology as a philosophical lens applied in education

In his seminal text on phenomenological psychology, Husserl

(1977) argues that phenomenology is not a substantive discipline like mathematics, history, or sociology. Rather, it is based on experiences, consciousness, and an understanding of human beings, context, and the subjectivity of reality. Phenomenologists argue that phenomenology is the study of experiences as lived, and it illuminates the structure and meaning of human consciousness (Husserl, 1977; Heidegger, 2010). This Westernized philosophical movement has its roots in Edmund Husserl's transcendental phenomenology but has evolved into various forms of hermeneutical and existential phenomenology through the work of philosophers such as Martin Heidegger, Jean-Paul Sartre, Simone de Beauvoir, Maurice Merleau-Ponty, and Paul Ricoeur. The philosophies of these canonical phenomenological authors appear quite strongly in the academic contributions to modern Western curricula and pedagogies by researchers such as Maxine Greene (1971), Madeleine Grumet (1987), Max van Manen (1997), Tetsuo Aoki (1992), William Pinar (2012) and Oscar Koopman (2013; 2016; 2018), who have all made significant contributions to the fields of curriculum studies, teaching, and learning. Phenomenology is the science of experiences as lived and is both a theory and a method used to explore human interactions and consciousness. For contextualization, phenomenology has emerged as a major European philosophical orientation during the 20th and 21st centuries but several African scholars expanded and applied phenomenology in different subjects such as indigenous knowledge systems (IKS) (Mutema, 2003) and research methodology (Groenewald, (2004). But from a South African perspective, Le Grange (2011) reported how the higher education curriculum needs to be decolonized because of the outcry of the "fees-mist-fall" movement. Furthermore, from a South African perspective, Koopman (2013) in his doctoral study also expanded on this

philosophy in the theorization and applied it practically as a method of research in science education.

Since 1974, several studies have reported the use of phenomenological theory and methods in teaching and learning (Denton, 1974; Vandenberg, Leroy Troutner & Max Greene, 1991; Trotman, 2006; Koopman, 2013). There has been a resurgence of interest in phenomenology among scholars at symposia on the philosophy and theory of education (Dall'Alba, 2009). Researchers and scholars such as Van Manen and Adams (2009) refer to phenomenology in an online context and propose that phenomenology be discussed at online seminars to reach a better understanding of attendees' experiences. Symeonidis and Schwarz (2016) report on a study conducted in Finland on the implications of a phenomenological perspective for curriculum reform and the achievement of educational objectives. A study by Webb and Welsh (2019) explored the lived experiences of educational leaders participating in a Scholarship of Educational Leadership course and revealed that phenomenological methods contributed to public discourse in higher education. Recently, various subject-related curriculum studies focusing on flipped learning have been conducted from a phenomenology methodological perspective, among them studies on students' experiences in science education, medicine, nursing, and other fields (Denton, 1974; Vandenberg, Leroy Troutner & Max Greene, 1991; Trotman, 2006; Koopman, 2013; Post, Deal & Hermanns, 2015; Koopman, 2018; Koopman & Koopman, 2018; Park, Park & Chae, 2018; Aslan, 2020; Koopman & Koopman, 2021).

In South Africa, like in the rest of the Western world, phenomenological research in the field of education has been expanded from an African perspective and became the "torchbearers" of

phenomenological pedagogic research in Africa (Koopman, 2013; Koopman, 2016; Koopman, Le Grange & De Mink, 2016; Koopman, 2018; Koopman & Koopman, 2018; Koopman & Koopman, 2021). For example, Koopman and Koopman (2018) published a scholarly text, *The body as blind spot: Towards lived experience and a body-specific philosophy in education*. The authors ask an insightful question: "What do the philosophies of phenomenological scholars such as Husserl, Heidegger, and Merleau-Ponty tell us about education in South Africa?" They conclude that:

... human consciousness encompasses an individual's totality of experiences with the world. Therefore, lived experience should form the fundamental basis of teaching as a way to illuminate a person's active-passive participation in the world ... The so-called "high knowledge and high skills and they" approach, one of the seven principles that form the basis of South Africa's Curriculum and Assessment Policy Statement, cannot give texture and structure to the body, or teach how to learn to connect with the mind. Instead, it brings greater separation between body and mind, which we have argued forms the basis of Western frameworks of thinking. Such a paradox serves the interests of multinational businesses and the corporate world with a strong focus on consumerist market-driven knowledge (p. 15).

The authors argue that from a phenomenological point of view, the CAPS policy has failed to connect or give explicit "texture and structure to the body on how to learn" as there is a mismatch between the so-called "high knowledge" and "high skills" that the CAPS policy aims to achieve.

2.2 Flipped learning as a student-centered approach

Flipped learning is a student-focused approach characterized by active engagement, experience, and consciousness about their learning. To apply phenomenology as the science of understanding human beings at a deeper level by interrogating the phenomenon related to the lived experiences of student teachers during the pandemic in an online course. This description of phenomenology served as a theoretical guideline for this study on the level of subjective reality of student teachers on their way to becoming professional Economics teachers. Student teachers had their own lived experiences of pedagogical dimensions that emerged during a flipped learning experience at a time of global crisis. This prompted the author to explore student teachers' experiences-as-lived and consciousness during an online teaching course.

Research studies on flipped-class pedagogy have explained that a student-centered approach involves a strategy that actively engages students (Bergmann & Sams, 2012; Presti, 2016; Tanis, 2020). Research has shown that there are educational advantages to flipped learning in face-to-face, blended learning, or distance education contexts. Lin, Wang, and Lee (2022) view the flipped learning approach, as how students use their learning styles and learn at their own pace to achieve course outcomes. Scholars argue that flipped learning creates an environment that allows the interaction between the students and teachers to increase (Bergmann & Sams, 2012; Cope & Kalantzis, 2022), and engages students in learning through application and practice (Khan, Johnston & Ophoff, 2019). According to Tanis (2020), flipped learning increases constructive interaction among students and teachers. The need to leverage technology to mediate communication between faculty and students and among faculties has led to a spike in the use of flipped learning in virtual teaching

applications, especially during COVID-19 (Tanis, 2020). In addition, Nielsen (2020) argues that flipped learning requires students to learn through application and practice, and ultimately brings about self-directive learning. Finally, more in-class time for individual attention and remedial support is an advantage of this strategy (Lai, 2021; Ainsworth, 2021).

2.3 Pedagogical dimensions in the design of a flipped learning experience

This approach emerged where two chemistry teachers, Jonathan Bergman and Aaron Sams (2012) experimented with the inverted classroom teaching strategy to make up for the loss of in-class time. Student contact time was interrupted by a change in the school timetable, either through cultural events, sporting activities, and public school holidays, which had an impact on the completion of the syllabus. Based on chemistry teachers' lived experiences, they planned and used pre-recorded class notes as backup learning material, and in-class practice activities involving relevant subject content to support their learners. Their flipped classroom management strategy increased interaction and participation among the learners. They facilitated their classes by moving to in-class and out-of-class sessions and specifically used selected YouTube videos or self-made videos to support chemistry learners in their learning journey. Their classroom management strategy freed up more in-class time for hands-on learning, expanding individual instruction or adjusting instruction, and remedial support, if needed, to support slow learners. Support could be provided to the group as well as to individual learners, and the learners and teachers could collaborate and share ideas during the in-class time. In-class time could be set aside for more intensive remedial sessions with struggling students. After completed tasks or assignments had been graded, constructive feedback was provided, and teachers and learners could identify the activities,

assignments, and tasks that required more attention. A plethora of literature reports that flipped learning as a student-centered approach is based on pedagogical dimensions in support of student learning. The pedagogical dimensions of flipped instructional design are personalized learning, self-directed learning (SDL), collaborative learning, and higher-order thinking skills (Presti, 2016; Lin & Hwang, 2018; Koh, 2019; Lin, Wang & Lee, 2022). Koh (2019) systematically reviewed these pedagogical dimensions and concluded that the dimensions can be used to improve flipped-classroom practices. The dimension of personalized learning in the flipped-classroom environment supports a flexible environment (Wanner & Palmer, 2015; Xhomara, 2022). Flipped learning is a student-centered approach based on flexibility, and is aimed at enhancing personalized learning experiences in a face-to-face, blended or distance learning context (Wanner & Palmer, 2015; Lin, Wang & Lee, 2022). Self-directed learning supports students' autonomy and intentionally drives students' responsibility for their learning (Hadžiahmetović, 2021; Van Alten, Phielix, Janssen & Kester, 2021). Furthermore, flipped learning promotes the dimension of higher-order thinking skills (Huang, Silitonga & Wu, 2022; Liu & Zhang, 2022). To achieve this dimension, the lecturer can use case studies and problem-solving scenarios that require knowledge application. Finally, collaboration and support through group work support active learning through sharing ideas, working together, and coming to mutual agreements in groups (Saqr & Peeters, 2022; Lin, Wang & Lee, 2022; De Back, Tinga & Louwerse, 2021; Sun & Lin, 2022).

3 METHODOLOGY

Before the study commenced, ethical clearance was granted (reference 2020/08/12/90159772/19/AM). Only

fourth-year BEd and PGCE student teachers who were registered for the *Teaching Economics* course were invited to participate in the study. A copy of the ethics certificate and a consent form was sent to all participating students. All students were informed that no student would be forced to participate, and participation would be voluntary. No student would be penalized for non-participation, and students could withdraw from the study at any time. In an exploratory qualitative study, interpretative phenomenological analysis (IPA) was employed as a methodological design (Moustakas, 1994; Smith, 1996). Scholars of IPA argue that this approach focuses on participants' narratives by extracting words in meaning as being and lived experiences (Moustakas, 1994; Smith, 1996; Smith, and Eatough, 2006; Bowe, and Sloan, 2014). Based on this philosophical lens, a semi-structured interview schedule was followed, and data were collected during virtual interviews in Teams videoconferencing sessions (Moustakas, 1994; Sandberg, 1997; Saldana, 2013).

Student teachers who were registered for the year course (n=158) *Teaching Economics in the Senior Phase and Further Education and Training Phase (Senior/FET)* were invited. Only 12 student teachers responded to the invitation; however, four fell ill (Covid-related sickness) and had to withdraw from the study. Consent forms were sent to the students. Before the MS Teams videoconferencing interviews with (n = 8) participants started. Specific codes were applied to protect the identities of participants, which ensured confidentiality, namely FG1, FG2, FG3, FG4, FG5, FG6, FG7, and FG8. After participants had signed the online consent form, the interview sessions were scheduled on Microsoft Teams. Before the interview session, participants were reminded that if they felt uncomfortable, they could withdraw from the study at any time. Furthermore, it was also communicated that

no participants would be penalized for withdrawing or non-participating. The MS Teams videoconferencing sessions lasted 45 minutes. As stated earlier, the IPA process of data collection and analysis was followed. Data collection and analysis were based on participants' direct words or first-person accounts of lived experiences, which had been captured and analyzed to determine specific themes. An IPA was conducted to create a narrative account for each participant, which reflected meaning-making, experience, and dialogue through corroborative verbatim statements (Smith, 1996; Smith & Eatough, 2006; Bowe & Sloan, 2014). IPA is a complex and time-consuming process. The following steps in the IPA process were followed:

- *Step 1: Start with multiple reading, listening, and noting the text of each participant*
- *Step 2: Use your transforming notes into converting into emergent themes*
- *Step 3: Seeking relationships and make connections across clustered themes*
- *Step 4: Identifying patterns across themes and subthemes* (Walsh, 1994; Groenewald, 2004; Trotman, 2006; Smith & Osborn, 2008; Pietkiewicz & Smith, 2012; Groenewald, 2004).

These steps were followed to bring the collected data sets in line with the interview questions, which was a time-consuming process. Based on the IPA steps, a phenomenological structural process was followed to analyze data, namely "data explication". According to Hycner (1999), explication is an "investigation of constituents of the phenomenon while keeping the context of the whole" (p. 161). A simplified explication technique was used: the interview questions and transcriptions were read twice, and notes were made. Then concepts and words that occurred frequently in the extracts were

underlined or highlighted with a specific color for easy categorization. Each category used codes that identified each theme. Only related or aligned extracts under the questions relating to each pedagogical dimension (category) of flipped learning were posted. During the final stage of the process, codes and extracted data were categorized according to the themes that had been generated. Transcriptions of the data sets obtained from each FG and recordings of the interviews were emailed to participants to verify whether the transcriptions and recordings were a true reflection of the interviews. This allowed participants to ensure and confirm the correctness of the data set. All true and correct data sets were signed off by participants. If participants found misrepresentations in the extracts, they highlighted the errors. The extracts were then corrected by the author. When phenomenological methods are used, research rigor is based on the notion that credibility is the scientific acid test that ensures the trustworthiness of research findings. Studies report that to ensure the credibility of data presented in any form, the data must meet credibility requirements, that is "content-related credibility, the credibility of the method, and communicative credibility" (Booth, 1997; Bowden, 1996; Sandberg, 2005; Collier-Reed, Ingerman & Berglund, 2009). Without content-related credibility, the researcher cannot get a sound insight into a phenomenon (in this case, student teachers' experiences-as-lived when exposed to flipped learning design in an online module during the COVID-19 crisis). Åkerlind (2005) posits that to implement rigor in content-related credibility, it is a prerequisite to understand the phenomenon under investigation and to have an "open

understanding" of the importance of the topic. As said earlier, the interpretative phenomenological process of data collection and analysis was used. Booth (1997) concurs that the credibility of the method "lies in the match between the goals of the study and its design and execution" (p. 136). Finally, if research findings have communicative credibility, it means that the research community has access to the findings and conclusions of the study. This process opens the way for scrutiny, recognition, and judgment of the credibility and legitimacy of the researcher's interpretation of the findings (Booth, 2008; Sandberg, 2005; Åkerlind, 2005).

4 FINDINGS

The following themes were identified after rigorous phenomenological research had been done and the data explication process had been completed.

4.1 Promoting personalized learning experiences

Participants agreed that flipped learning is a student-centered approach. They stated that the focus is on students, which places students at the center of the learning. One participant (FG2) actively engaged in his studies. This participant said that he had gained personally and individually from the flipped learning approach:

It is a student-orientated approach, which placed us at the center of learning. The focus is on students. Students are placed at the center of the learning process. We became autonomous and life-long learners (FG2 interviewee, text unaltered).

The findings indicated that it was expected of all students to take responsibility for their learning. Students said they had been empowered and had

become autonomous learners. A participant said she had invested many hours in her studies. She echoed that she reaped success and reward:

As a student, I must take responsibility for my learning. I believed personally, the more you invested efforts in your studies, the more success and reward are much greater and sweeter (FG1 interviewee, text unaltered).

Each team consisted of five participants and could choose to study one of three contemporary economic issues, namely poverty, unemployment, and inflation. Individual team members could select any of these topics, but group members had to work together to present the findings of the group. Participants had to present their findings as part of the team, but they could personalize their own learning goals. One participant mentioned:

Flipped learning gives me the freedom to choose my topic as per the learning unit. I decided to be part of a team that focuses on unemployment as a collaborative project. We had one thing in common to achieve our learning goals for the project (FG6 interviewee, text unaltered).

In flipped learning, out-of-class activities are part of individual work aimed at stimulating personalized learning. 80 percent of participants mentioned that they had decided, either individually or as a group, to prepare certain sections of the work collectively, but individual accountability had been important. Participants said they had controlled their learning and contributed to each project, individually. A participant said:

Nobody is forced into a team or a group. We can choose which team you would like to work with. Teams prepare for the in-class virtual videoconferencing sessions.

What I like, you can choose when, where, and how to study (FG3 interviewee, text unaltered).

4.2 An empowering strategy that enhances higher-order thinking skills

70 percent of participants mentioned that they had been empowered by this approach. They felt that flipped learning stimulated critical conversations and enhanced their higher-order thinking skills. They mentioned that they had to reimagine, create and design group projects, and present their findings individually. One participant said he had reflected deeply on some of the topics. He suggested constructive ways of creating strategies:

This course empowered me with deep higher-order thinking skills and supported my constructive learning experiences in most of my learning units. The learning unit, design of sound classroom management practices, and implementation of culturally responsive teaching strategies for diversity changed my way of thinking about issues of poverty that most teachers face at schools. Another online discussion forum session, which I think, namely unemployment of youth in our country compelled me to reflect deeply and suggest constructive ways of how to create strategies through our group presentations (FG1 interviewee, text unaltered).

Participants said that the course had empowered them to create excellent lessons and to practice during in-class sessions. Each team member was given opportunities to practice and present lessons to their peers. One participant said that she had designed economics lessons and posted them on the course site:

I could apply economics subject matter content and my pedagogy [flipped learning] to the context where I teach during my teaching placement sessions [school-based learning]. What I meant, in our learning unit, I used the CAPS policy, planning, designing, and presenting my work. Created economics lessons based on our learning. This exercise empowered me with lesson design and presentation skills. What I had learned, the more I practiced my teaching skills, the more I could create excellent economics lessons (FG5 interviewee, text unaltered).

Another participant expressed the following sentiments:

I created economics flipped learning lessons and used team-based learning often in my TP placement sessions. FID enhanced my digital literacy skills and increased my awareness of valuing studying as a distance learner. After every lesson, I had the opportunity to reflect with my mentor (FG8 interviewee, text unaltered).

Participants said the course had improved their higher-order thinking abilities. Most of the topics promoted critical thinking. Several sensitive topics, such as child labor, poverty, and unemployment, challenged them to become change agents in their respective communities. A participant said the following:

This course seriously empowered us with higher-order thinking abilities, in particular in the prescribed contemporary economics topics. These topics as prescribed in the CAPS policy, inflation (grade 12), poverty (grade 10), and unemployment (grade 11) promote critical thinking and

higher-order thinking (FG6 interviewee, text unaltered).

4.3 Increased collaborative learning, sharing, and critical conversation as experiences-as-lived in the course

During the course, Economics student teachers shared their views and reached an agreement on specific issues during both in-class sessions (virtual videoconferencing) and out-of-class sessions (individual accountability). The participants mentioned how they collaborated on topics for out-of-class sessions. Participants made decisions as individuals and gave group inputs on issues discussed throughout the course in the online ODeL space. A participant mentioned:

During our team group for out-of-class sessions related to the topic the state poverty in our community, we received learning material as "homework" to prepare for our Microsoft Teams virtual videoconferencing sessions (FG2 interviewee, text unaltered).

Online virtual videoconferencing and online discussion forum sessions promoted sound peer relationships. Some participants said that flipped learning had created opportunities for collaborative learning in the course. A participant said that students had shared, collaborated, and engaged in online spaces during a time of crisis:

I agreed that flipped pedagogy promotes building sound peer relationships. It further creates collaboration and provides an accepted space for learning. We shared, collaborated, and engaged in online spaces during crisis times. Yes, it creates a supportive and loving classroom atmosphere, which says you are most welcome (FG1 interviewee, text unaltered).

Participants highlighted different flipped learning techniques, particularly team-based learning. Some of them viewed this technique as an excellent teaching tool when teaching macroeconomics, which many learners find extremely difficult. This participant agreed with the previous participant:

Let me give you an example, ... the session on team-based learning as flipped learning technique; this teaching approach makes it clear that in the classroom setting, the teacher and learners interact on lesson content. Another example comes to mind... In one of my discussion forum sessions on business cycles (macroeconomics), we debated the impact of COVID-19 on business operations. In our deliberations on the virtual videoconferencing Teams platform, lively engagements amongst fellow coursemates challenge our very own assumptions about the pandemic locally (FG5 interviewee, text unaltered).

4.4 Promoting self-directed learning as experiences-as-lived in the course

Participants thought that self-directed learning supported students' autonomy. It motivated them to engage and they became willing to take full responsibility for their actions. One participant said the following:

I have learned that self-directed learning supports student autonomy. It is the very same autonomy and the willingness to take full responsibility for one's actions to reflect (FG7 interviewee, text unaltered).

Participant FG6 said that she had taken control by planning and managing her time. She was in charge of her studies:

I carefully do the planning, and managing of time and take charge of my studies. I am responsible for my studies (FG6 interviewee, text unaltered).

5 DISCUSSIONS

Scholars argue that phenomenology is the "science of experiences-as-lived", both philosophically and methodologically, because it describes the unique characteristics of human interactions, experiences, and consciousness. Literature reports that flipped pedagogy is a student-centered approach based on flexibility to enhance personalized learning experiences, either through face-to-face contact or in a blended learning or distance learning context (Wanner & Palmer, 2015; Aslan, 2020; Lin, Wang & Lee, 2022). Findings revealed that the participants agreed that the pedagogical dimensions are drivers for the functionality of the teaching approach and promote personalized learning as well as team-based learning in the flipped learning setup and during out-of-class sessions. Fassbinder, Fassbinder, and Barbosa (2015) agree with the finding of this investigation that the pedagogical dimensions impacted positively the functionality of the flipped pedagogy during the COVID-19 pandemic. Flipped learning places the student at the heart of the learning process and it requires individuals to take control of their learning. Participant FG8 said: *"This teaching strategy is focused on students ... it refers to it as a student-centered approach ... strategy places students at the center of his/her learning [sic]."* Koh and Ling (2019) report that a systematic view of pedagogical dimensions is an important construct for the implementation of flipped learning following a student-centered approach. Studies conducted on personalized learning as part of flipped learning show the same advantages (Fassbinder, Fassbinder & Barbosa, 2015; Sun & Lin, 2022; Xhomara, 2022).

Flipped learning promotes higher-order thinking and critical thinking skills (Huang, Silitonga & Wu, 2022; Xhomara, 2022; Liu & Zhang, 2022). To achieve this, the lecturer used case studies and problem-solving scenarios that required knowledge application. In the course *Economics Teaching*, student teachers were divided into teams, and they could choose one of the topics in the eTeaching Plan. The members of each team worked together to decide how to approach challenges and how each member of the team would apply the learned knowledge and skills to solve problems. A tutorial letter provided the scenarios and each team reported weekly on the status of their case or problem. One participant said the *"course had empowered me with deep higher-order thinking skills and supported my constructive learning experiences in most of my learning units"* (FG4 interviewee). Participants agreed that the method used in the course had improved their critical thinking skills significantly. A study conducted by Huang, Silitonga and Wu (2022) reports that the "business simulation game" applied in flipped learning leads to active participation and promotes the higher-order thinking skills of students. Liu and Zhang (2022) report that they used the WeChat social media tool, which led to improvements in university students' academic performance and higher-order thinking skills.

Thirdly, many studies have concluded that flipped learning enhances collaboration through group work and supports active learning through the sharing of ideas, working together, and reaching group consensus (Aslan, 2020; Saqr & Peeters, 2022; Lin, Wang & Lee, 2022; De Back, Tinga & Louwerse, 2021). It was found that participants were positive about collaboration. Participant FG2 said, *"In my team, we researched, analyzed information, and made critical reflections on the state of poverty. We had to share and collectively agreed in our deliberations."* De Back,

Tinga and Louwerse (2021) report on a study involving a cognitive science course offered in a virtual learning environment. Their study showed that students shared ideas and worked together to achieve the intended learning outcomes. In the same vein, Participant FG5 mentioned that participants had *"deliberations on the Teams platform, which was lively engagements amongst fellow course mates which stimulated peer-collaborations [sic]"*. Alajlan (2022) applied a quasi-experimental design to the flipped learning approach in a university lecture room and reported that flipped learning improved participation and led to more active engagements and more positive learning experiences.

Finally, it was reported that self-directed learning as a pedagogical dimension supported students in becoming autonomous in their studies. It created a sense of responsibility, as an intentional process was followed to encourage students to take responsibility for their learning (Hadžiahmetović, 2021; Van Alten, Phielix, Janssen & Kester, 2021; Aslan, 2020; Van Wyk, 2020; Park, Park & Chae, 2018). The findings revealed that participants agreed that flipped learning created spaces for self-directed learning. A participant alluded to *"autonomy as an awareness amongst students and the willingness to take full responsibility for one's actions [sic]"*. Similarly, Khodaei, Hasanvand, Gholami, Mokhayeri, and Amini (2022) state that the effective application of an online learning method increases students' self-directed learning and metacognitive awareness.

6 IMPLICATIONS AND LIMITATIONS

This study contributed to the literature on phenomenology as a method of teaching economics in an ODL context. It also advanced the understanding of how to use an interpretive phenomenological study to explore pedagogical dimensions that

drives the functionality of flipped learning in an ODeL context. To the best of the author's knowledge, this was the first empirical study of this nature conducted in an ODeL environment during the COVID-19 pandemic. Furthermore, this qualitative study gave voice to students' experiences-as-lived of pedagogical dimensions that energise the functionality of flipped pedagogy in an online course at a time of crisis. The study also added to an understanding of and insight into the lived experiences of student teachers exposed to the pedagogical dimensions of the flipped pedagogical design applied virtually.

The epistemology (knowledge of the subject) of pedagogical dimensions as drivers for the success of the flipped instructional design applied within an ODeL context was extended in this study. However, several limitations and suggestions for future studies should be noted. Firstly, the small sample of participants might limit the generalization of findings. Future studies on this phenomenon with a larger sample of *Teaching Economics* (BEd and PGCE) students and a online survey design, might report different results. Moreover, empirical studies could consider a mixed methods design and probability sampling approach to yield different results. Future research could extend the inquiry to other pedagogical dimensions, for example by examining the effect of motivational factors on the self-efficacy of student teachers.

7 CONCLUSIONS

The literature concludes that phenomenology is the "science of experiences-as-lived" because it explicitly describes the unique characteristics of human interactive experiences and consciousness. Based on this notion, this investigation reported the findings of participants' experiences-as-lived of the pedagogical dimensions acting as functional drivers of flipped pedagogy in a course at an ODeL teachers' education college during the COVID-19 pandemic. In

the context of this study, a connected online learning management system was used for flipped pedagogy in teaching an online Economics course. This allowed students to share ideas, opinions, beliefs, viewpoints, and experiences, engage in collaborative learning, develop meaningful higher-order thinking skills, personalize their learning, and take responsibility for self-directed learning experiences. Participants agreed that the teaching approach promoted personalized as well as team-based learning in the flipped learning set-up as well as during out-of-class sessions. Furthermore, it was revealed that there had been an improvement in participants' higher-order thinking skills. The findings showed that students shared ideas and worked together to achieve the intended learning outcomes of the course. Finally, self-directed learning as a pedagogical dimension helped participants to become autonomous in their studies. It also encouraged participants to take responsibility for their learning. This exploratory study showed that the pedagogical dimensions play a crucial role in successful flipped learning. In addition, the study contributed to the practical implementation of the pedagogical dimensions and identified opportunities for future research.

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Online Learning Barriers Encountered by University Lecturers in Using Communication Strategies: A Phenomenological Approach

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ABSTRACT

The intent of the research is to conduct a phenomenological study about the lived experiences of South African university lecturers. The experiences of the lecturers are explored with regard to the online learning barriers encountered when using communication strategies. The Community of Inquiry and Heidegger's interpretive phenomenological framework were employed to comprehend the lecturers' experiences of designing and implementing teaching using online technologies, such as smartphones, emails, SMSs, WhatsApp, Facebook, tutorial letters and discussion forums of the learning management system when communicating with students. In view of the current situation with all the intricacies, deficiencies, and challenges of online teaching and learning, the findings showed that the lecturers' teaching presence is not clearly discernable. Nevertheless, there seem to be attempts by lecturers to ensure that their teaching and social presence are better integrated, albeit in an amorphous manner.

Keywords: Phenomenology; Online Communication; Lived Experience; Strategies; Google Forms; WhatsApp

1 INTRODUCTION

Phenomenology is perceived as the science that expands our understanding of human lived experience (Husserl, 1970). Brown (2021) argues that phenomenology focuses on the world as lived by a person, not on the world or reality as something separate from the person. Heidegger (1967) invoked the term *Dasein* which means "being there" or "there being" in the world as a way of extending the Husserlian epistemic outlook to include our worldliness, that is, how time and place influence our thinking, behaviour, and actions in the world in which we live. In the modern world, there has been a rapid shift from the real world of physical interaction with others and objects to a non-real world of virtual and technological interactions, also referred to as the screen universe. Therefore, people are increasingly using

technological tools such as e-and-m-mobile applications as they travel or move around to communicate with others. During the COVID-19 pandemic, these tools, with their sophisticated web-based online applications, have gained currency in education worldwide as an alternative teaching and learning and communication tool with students.

In an academic context, communication is simply the transfer of information from one person to another, from one group to another, or from a person to a group and vice versa. According to Alawamleh, Al-Twait and Al-Saht (2020), the word communication is derived from the Latin "communis" meaning "common". Therefore, "communication" means "making common", "making known", and "sharing", and it involves both verbal or non-verbal and electronic means of human interaction. No communication occurs unless a

shared understanding emerges from the exchange of information (Brown, 2022). In the university context, e-and-m-mobile technologies have become a significant part of academics' lived world experiences as their mode of communication with students shifted from human-to-human communication to human-to-human via the "screen universe". According to Nisar (2020), when we communicate with others via technological web-based online tools, the lived body transposes into virtual reality.

As the body transposes into a virtual unreal world, Deleuze and Guattari (2005) refer to the human body being turned into a body without organs. This is because in a virtual world, the real and virtual body coalesce in the sensation of a different nature. When we communicate with others via various technological applications, communication becomes distorted as the natural bodily actions go unnoticed and undetected.

Therefore, it is the intention of this phenomenological investigation to research the following main research question: What kind of barriers are experienced by lecturers in this virtual world of online teaching and learning with regard to online communication strategies? More specifically, the study aims to determine (i) Which online communication strategies academics mainly use in the online teaching and learning environment? And (ii) To what extent are such strategies effective in teaching and learning? To this purpose, the study sought to identify the barriers encountered by lecturers regarding online communication strategies. The findings of this study can help expand our understanding of the challenges academics might encounter regarding effective online communication strategies. Communication in an online environment requires careful planning in comparison to communication in a traditional environment. Fostering a sense of community in online learning makes the student's learning experience

more meaningful. It was established that lecturers generally communicate with students online for the mere sake of imparting knowledge (Fredericks & Alexander, 2021).

As online lecturers are not bound to a specific time, they use quick communications, such as instant message systems, to check in with students to ensure that they are able to access study materials and complete their required programme of study within the scheduled time frame. Such communication serves to uphold the connection between online instructors (including e-tutors) and students, as they indicate to students that someone is there to help and cares about their course experience.

2 THEORETICAL FRAMEWORK: COMMUNITY OF INQUIRY AND HEIDEGGER'S INTERPRETIVE FRAMEWORK

Modern science has no consensus regarding the extent of the interrelation between the general theory of communication and various disciplinary approaches. Fry (2019) stipulates that the pinnacle of cybernetics is the awareness thereof that ensures its control over society. "Communication procedures can operate under the circumstance cybernetic control by institutional structures." Consequently, the systemic approach describes communication as a form of governance applicable to a particular organisation and society in general (Bakar, Shah & Qingyu, 2020).

Along with its merits, it becomes crucial to determine the demerits of systems theory, particularly regarding its phenomenological approach to communication. Thus, when doing so, an individual is viewed as an element of the general organic whole, wherein a person is only a variable on an equal footing with others. To explore the experiences of lecturers in teaching and learning, in view

of this new normal (online teaching and learning), the study utilised a Descriptive Phenomenological Research Design (Misra & Mazelfi, 2021).

The Community of Inquiry and Heidegger's interpretive phenomenological framework exploration aspires to develop meaning from understanding a phenomenon through the experiences and reflections of not only the research participants, but of the researchers as well (Creswell & Poth, 2018). While this study bound and contextualised lecturers' experiences within a given course, phenomenological inquiry provided the necessary means to better understand the conscious experience of academics within this given context.

The central concept of this approach is the concept of "lifeworld", which is defined by Fry (2019) as a set of subjective and direct ideas that people have about themselves and the world around them, and about the norms and values which are always initially set in everyday life

experiences that define the person's interpretation of reality. These ideas precede the scientific experience of researchers, and do not depend on scientific findings.

3 RESEARCH METHODOLOGY

Khateeb, Shdaifat, Kassab and Shdaifa (2020) argue that methodology is not only the methods the researcher employs to conduct research, but entails the research design, its foundations, assumptions, limitations and characteristic procedures, and outcomes. Denzin and Lincoln (2018) take a step further by viewing methodology as the logic and theoretical paradigm embedded within a research study, while methods are the specific techniques utilised for investigation and assessment. Husserl (2019) echoes this description and emphasises the need for researchers to be keen to deliberate on how epistemologies, conceptual models, assessment instruments, and research design are conceptualised in a research study

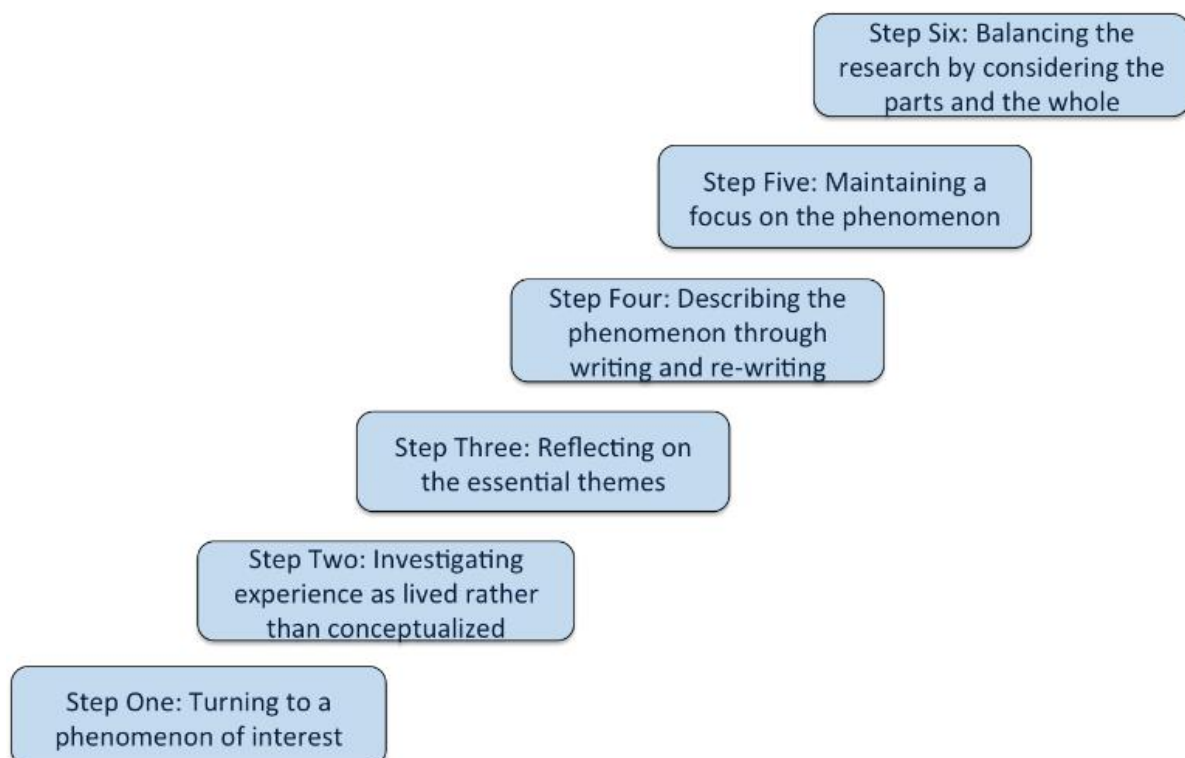


Figure 1: Steps in the phenomenological inquiry

This study adopted a phenomenological approach to accurately capture the experiences of university lecturers in the South African context regarding their online communication strategies. Figure 1 below provides a brief step-by-step overview of what a phenomenological investigation entails.

According to Faturoti (2022), as can be seen in figure 1, a phenomenological methodology involves data collection techniques that require the researcher to turn the phenomena under investigation into a lived reality and not into a conceptualisation of the phenomenon. Furthermore, this approach requires constant interaction with the data to allow for movement between the six steps. This data construction and analysis process is particularly appropriate and relevant for this study in view of its ability to move up and down along the stairway of phenomenological inquiry as new data is gathered and numerous themes emerge and coalesce.

This research was conducted at a single Open Distance e-Learning institution based in Gauteng Province, which was sampled purposefully. The objective of this design is to arrive at a description of a certain phenomenon (Creswell & Poth, 2018). As a result, the knowledge presented in this study is not universally true, but is an understanding based on what the researchers have been able to glean through discussions and interpretation. Six participants (labelled as A to F) took part in this study, consisting of three females and three males, which enabled the researcher to have rich data for analysis. The participants were sampled purposively because the study is specific to a certain phenomenon, and the selection criteria are lecturers who teach undergraduate students who learn via an online approach.

Data were collected via standardised open-ended interviews, ensuring that all participants answered the same questions, thus minimising possible

bias. There were six interview questions: three for the female and three for the male lecturers. The questions were designed to investigate participants' more profound online communication experiences.

Interpretive phenomenology presumes that individuals make selections, but are restricted by the specific circumstances of their daily life, which is recognised as situated autonomy. According to Husserl (1919), this contextual understanding of experience implies that the description of phenomena without interpretation is incredible. Therefore, lived phenomena are the foci of the research, and the reality and meaning of this phenomenon are embedded within the deliberate experience of an individual as well as the researchers.

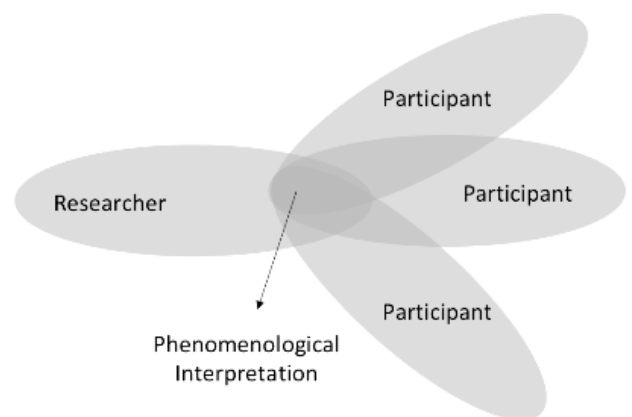


Figure 2: Phenomenological interpretation

The position of the researchers in figure 2 is to enable the utilisation of their expert wisdom to guide the inquiry and make it expressive. Rather than amassing individual essences from each lived experience as in descriptive phenomenology, the commonalities and variations in the individual subjective experiences add to the description of the connotations that participants create and how those meanings affect their range. Moran (2019) maintains that interpretive phenomenology addresses the unique experience of each participant within their experience of similar phenomena.

The interview protocol focused on the participants' reflections on their conscious experience of online communication challenges. In this case, the purpose of the phenomenological inquiry was not just to identify the kind of barriers experienced by lecturers, but to come to a better understanding of how six participants from two faculties communicate in an online environment.

The data collection process involved the Faculties of Humanities and Education and spanned two weeks, during which six interviews were conducted. In a sample of six participants, the two faculties were represented by three lecturers: one senior lecturer, one associate professor and one full professor.

Personal and direct connection with each participant ensured the responses were kept anonymous. Additionally, conducting interviews away from a university environment eliminated possible bias induced by the influence of an authority figure over participants who voluntarily discussed their experiences.

All structured interviews were scheduled and conducted privately, and the researchers clarified the study's purpose and assured confidentiality. Due to social distancing requirements and the university's limited time frame for data collection, interviews were conducted according to the participant's request, and this resulted in six interviews being performed telephonically. Two via Teams, two through WhatsApp calls and two through WhatsApp video calls. During the interviews, the following questions were posed in addition to the main interview questions to seek clarification and elicit further detail:

- What exactly do you mean?
- Can you elaborate further?
- Can you substantiate?
- Please clarify.

- Motivate by providing suitable examples.

No participant left the study for personal reasons. The telephone interviews lasted between 30 and 45 minutes, depending on the deliberations from the participants, and were audio-recorded where possible. In some instances, notes were taken because the participant did not consent to being audio-recorded. It was imperative that data were kept confidential. The interviews were subsequently transcribed, and participants verified their accuracy.

Experts from the departments of Media and Communication, and Curriculum and Instruction were requested to validate the in-depth interview guide. After the validation process, the researchers modified the guide and implemented the necessary changes as recommended by the validators.

Within this research study, the data collection instruments included a metacognitive survey tool, the lecturer and student reflections, and in-depth interviews with the participants. Each instrument provided a window into the participants' perceptions of how specific activities and online communications affected their metacognition and overall teaching and learning experiences (Bakar, Shah & Qingyu, 2020). However, the in-depth, phenomenological interviews provided the opportunity to engage telephonically and personally with all participants and allowed them to elaborate and reflect upon their challenges with online communication in teaching and learning within the institution. The embeddedness of this phenomenological method in this study allowed for a more holistic and contextual view (Creswell & Poth, 2018; Denzin & Lincoln, 2018) of how participants wrestle with and resolve metacognition in their respective departments. The analysis of the interviews added a rich dimension of participant experiences to the study. It

established the complexity of student learning within the setup of an institution of higher learning.

Husserl's (2019) strategy was used to explicate the data. Husserl's (2019) seven procedural stages from the Duquesne school, which obey the Husserlian tradition, is a robust method used by the researchers to discover, comprehend, and explain the lived experiences of study participants. The following stages were adhered to:

- Reading and interpreting transcripts,
- Extracting fundamental statements,
- Articulating meanings,
- Classifying into clusters of themes and validating with the original text,
- Describing,
- Returning to participants, and
- Incorporating any modifications grounded on the participants' feedback.

4 FINDINGS AND DISCUSSION

The findings in this study represent a co-construction of the researcher's interpretations of the lived experiences of the participants. Various themes surfaced from the study. The intention of the study was not to determine one universal meaning of the phenomenon, but rather to give attention to the unique experiences of lecturers. Various online communication strategies were identified. Table 1 provides a summary of the different strategies employed as web-based online tools and various technological tools by the lectures.

4.1 Online gadgets

The use of gadgets such as computers, laptops, cellphones, and tablets, together with online video conferencing platforms, enable lecturers to have new practices, experiences, and opportunities for teaching and learning. Although online

learning has been around for many years, most educational institutions have yet to integrate this mode of learning into their curricula (Werang & Radja, 2022).

Table 1: Online communication strategies

• Online gadgets for emails, WhatsApp, Facebook and SMS • Computers • Laptops • Smartphones • Tablets • Tutorial letters

Additionally, using this method, especially in conjunction with face-to-face teaching, means that the workload of teaching staff tremendously increases as they need to create content for their online platforms while also learning to use online learning tools.

Participant E indicated that over 360 emails are sent and received daily. The average lecturer receives 180 of those emails each day, of which only 26% will contain useful and relevant information. When lecturers are bombarded with all this superfluous information, they simply bulk delete or skim through. However, there is a likelihood of missing out on important information that might be buried among all the other emails.

The average lecturer spends 12 hours a week checking, reading, deleting, and responding to emails — effectively utilising 28 per cent of the work week. With less than half of such emails deserving attention and many going unread, this is a big chunk of wasted time. Moreover, the sender always expects a response from the receiver. Simply getting back to work after answering an email takes an average of 120 seconds. This decreases productivity when lecturers check their emails 30 times per hour. A customer-facing employee cannot check emails at that rate, as it would impact productivity and customer satisfaction.

Participant C reported that students are more adept than lecturers when handling newer devices such as laptops and smartphones. This may be because of the agility of students when it comes to the latest technology or their exposure to technology from a very young age. On the other hand, lecturers are older than students by a generation, and may have had less exposure to technology while growing up (Vale & Graven, 2022).

Participant A reported that students tease lecturers by labelling them as the “Generation Born Before Technology (GBBT)”. It simply means that most older lecturers are less adept at handling the gadgets needed to teach online classes. Nowadays students are products of the “Instant Gratification” Generation because they want things instantly.

The use of gadgets in teaching and learning supports the study of Tagoe and Abakah (2018), where it was revealed that virtual learning makes standardised education accessible to students all around the globe. This is a stunning reward for online education providers. Participant B argued that students in remote areas and those who cannot afford the higher fees associated with traditional campus study programmes where sourcing funds and student debt often eclipsed the joy of learning.

However, e-learning and communication require the necessary computer equipment and a constant internet connection to run and enrol on online learning platforms. This can pose insurmountable challenges for some students and universities with outdated hardware and software (Thoiuraya & Radwan, 2022). It is also integral that in conducting online classes, the experiences, sentiments, and perceptions of students be identified so that necessary improvements can be made (Rodriguez et al, 2018).

4.2 Emails

Emails are the most vital instrument for communication, especially at Open and Distance e-Learning institutions. However, while they are valuable, there are several downsides, and several lecturers have expressed their discontentment with using emails for virtual teaching and learning (Faturoti, 2022).

While it is common to be consistently connected, some participants argued that not all students have constant access to cyberspace. There are numerous sources of free Wi-Fi in South Africa, such as municipal libraries and hotspots, shopping malls, and fast-food restaurants such as Kentucky Fried Chicken, McDonald’s, and many others. There are several places within urban areas where students who do not have access to the internet can access it free of charge; however, the lack of access is more pronounced for students who reside in rural areas where these public hotspots are few and far between, and mobile network is sporadic at best (Tagoe & Abakah, 2019).

It is not a secret that emails are not designed to be collaboration tools, yet many lecturers use them in that fashion. From managing projects to troubleshooting problems, never-ending email threads become inefficient, confusing, and troublesome for productivity. With many collaboration and project management products now available, emails can no longer be viewed as the tool lecturers turn to in order to keep abreast of tasks and projects.

Although emails are user-friendly, and the lecturers may send a message and have it instantly delivered to the mailbox of the intended recipients, who are fellow lecturers, there is a high likelihood of recipients ignoring the email. There is no guarantee that recipients will read and respond to emails promptly. Some lecturers ignore any alerts that may appear, which

signal that there is an email in their inbox. In the same vein, if the lecturer sends a time-sensitive email, there is no assurance that another lecturer will react timeously.

Most of the preceding factors mentioned can be combined into one major negative point: a lack of active participation from fellow lecturers. Some lecturers adapted to electronic communication well, while others did not, and those who did not adapt will generally resort to passive participation. Since there is no oversight because email accounts are private, there is no serious consequence to encourage lecturers to become active participants or to ensure that they do.

Issues experienced by online lecturers comprised of having to find ways of being effective in delivering the course, responding to a series of student emails, and becoming acclimatised to the online instruments and infrastructure. Critics of online teaching and learning question the value and effectiveness of online communication. Since online teaching and learning systems cannot convey real-time interactions between the lecturer and students, their educational effectiveness is lower than that of a traditional face-to-face lecture. Without understanding that it requires a significant amount of the lecturer's time, not responding to the head of departments' email messages in a timely manner can be seen as defiance (Brown, 2021).

One of the main arguments against the use of social media and electronic communication in a virtual environment is that they promote a disconnect from normal social activities. For example, lecturers would rather sit staring at their mobile phones or texting each other than make a phone call or start a conversation with a friend.

Cyberbullying is a major challenge with any form of online communication. There will always be bullies in any type of virtual classroom and electronic setting.

Where there is no oversight and no real supervision, it is easy for bullies to prey on their colleagues. This can also be one of the most detrimental issues when trying to use electronic communication in the classroom. Even in virtual classroom settings, bullying can discourage students from participating (Fredericks & Alexander, 2021).

Emails at the classroom level and other forms of electronic communication and social media have their uses. Each lecturer needs to weigh the pros and cons based on the curriculum and lessons, and then decide whether using emails is beneficial or detrimental to the students and their learning experience. As technology advances, there is every chance that the use of emails and electronic communication will become commonplace, depending on the age of the students (Fry, 2019).

Many online courses do not have synchronous live instruction from a lecturer, so the experience is no different than students self-teaching by reading text from a screen (Dziuban et al, 2018). In this format, after reading the assigned screen text, students churn out short answers, essays, discussion comments and reviews, and do quizzes to prove that they were engaged in the course. There are no oral responses because there is no synchronous interaction. If students have questions, a teacher's email response often comes far too late—and by that time, students have often figured out the answer or no longer care about it (Dziuban et al, 2018).

4.3 Tutorial letters

An online tutorial letter designed by a lecturer is a strategy used to communicate with students about the expected approach to teaching, learning, and assessment. The tutorial letter contains important information about the module a student is registered for. It guides the student on how to go about the module and navigate any difficulties. Moreover, it gives an overview

of teaching practice, especially for those who desire to become teachers, and it contains information about assignments and examinations. It also includes certain general and administrative information about the module (Thouraya & Radwan, 2020).

The University of South Africa (Unisa) is a well-known pioneer in Open Distance and e-Learning, and most institutions of higher learning emulate its best approach in this regard. Typically, students have access to tutorial letters immediately after registration. At Unisa, all tutorial letters are electronically available on the university's online platform, and students can view the tutorial letters for the modules for which they are registered. Online tutorials are provided with the latest technologies. Tutorial letters are well structured and user-friendly for students and lecturers, and they are provided in recent technologies. However, the six participants complained that tutorial letters do not provide detailed information about their registered modules.

Materials referred to in the tutorial letter may be downloaded. This suggests that course materials are downloadable. If given time and a little organisation from the student, an entire course can be downloaded, and the materials studied offline. Learning platforms may also employ a nifty video feature called "Dynamic Stream Switching", which allows for varying strengths of connection and bandwidth in real-time. This means that the content always streams steadily, no matter what speed of internet connection is available (Lim, Covrig, Freed, De Oliveira, Ongo & Newman, 2019).

4.4 Announcement platform

The online announcement platform is a learning management system that

assists primary lecturers in communicating with their subordinates and the entire university's administrative departments through the internet. It is advisable that lecturers access the institution's online platform on a daily basis because additional material and important notices are uploaded there (Misra & Mazelfi, 2021).

Lecturers use the announcements tool to inform colleagues about special meetings, local conferences or important course-related issues. When lecturers post an announcement, subordinates may receive an email reminding them to check their module website. The website for each registered module is specifically dedicated to supporting novice lecturers' learning for the module. When committed lecturers make a habit of visiting a module site regularly, they get accustomed to various features of online learning, such as:

- Acquainting themselves with the module details. What does the module entail? Is it a semester or year module?
- Visiting official study material portals to get important files such as old and new tutorial letters, study guides and question papers. For fully online modules, lecturers are advised to go to the learning units for study materials. Relevant documents provided by the respective lecturers are available in the Additional Resources tool.
- Checking the schedule to view formal assignments, their closing dates, and final examination dates.
- Engaging in the discussion tool will allow lecturers to exchange fruitful ideas with their students about the course. Lecturers may include other important topics and forums for the qualification (Faturoti, 2022).

Lecturers can organise virtual chat platforms for students to interact with their peers online during and after class hours. Giving group assignments and group discussions and allowing students to interact online to discuss the assignments is a step towards eliminating boredom (Alawamleh, Al-Twait, & Al-Saht, 2020). Virtual interactions are different from face-to-face interactions; thus, using these tools is a step towards closing this gap. It is an unfortunate experience that lecturers interviewed complained about novice lecturers who do not bother to check the Announcement platform.

MyMoodle is the institution's (Unisa's) formal collaborative teaching and learning environment. It primarily supports online courses and other institutional-related groups and communities. The institution's virtual platform is built on Moodle open-source software. myMoodle provides lecturers with access to all their current modules and project sites if students are linked to these (Bakar, Shah & Qingyu, 2020). In addition, as online learning leans more towards continuous assessment, students are likely to experience fewer online assignments and possibly no formal examinations (Dziuban et al, 2018).

Lecturers groused about students who do not keep to due dates for assignments. Their tasks are submitted late, and students who are not diligent constantly give flimsy excuses suspiciously occurring on assessment due dates such as ill-health supported by a medical practitioner's certificate, death in the extended family and domestic violence, amongst others. Below are actual excuses from slothful students requesting extensions from the primary lecturers of their modules:

Some students do not manage to submit the assignments before the closing date because of ill health. They lie about amputations due to diabetes.

'I was hospitalised for three weeks, and I am in possession of the doctor's certificate.'

Death of spouse due to COVID-19. 'I have a death certificate to back up the request.'

Domestic violence for parents who keep on quarrelling time and again. 'Mother ending up in the hospital and the father in custody. Divorce in the family is another excuse.'

'Stages 5 and 6 of load shedding in my area.'

Since some medical practitioners give false medical reports, lecturers are left without any choice except to grant extensions, even when the excuse is flimsy. As with any online class, it is vital that online lecturers provide timely and detailed feedback to students on their submitted work so students can see where they have mastered study material and where they still have gaps in their knowledge (Khateeb et al, 2020).

4.5 Consultation hours

Consultation means a time set aside for students to seek contact (most commonly) face-to-face with academic staff such as lecturers in order to raise any issues they may have in the unit they are studying. In addition, this time is to be used to consult on issues related specifically to the course the lecturer is teaching.

Students are urged to make it a point to communicate with their lecturers telephonically and use the lecturer's contact numbers. The working hours for consulting and contacting lecturers are indicated, and, in most cases, it is 08h00 to 16h00 from

Monday to Friday, excluding public holidays and weekends. Any available lecturer will answer the student's call and assist as promptly as possible. The following are experiences from lecturers:

'Most students call during awkward hours. Imagine getting a call at 1 AM. When you ask why the student calls during such time, the response is selfish and negative. They even say calls are cheaper when one calls late at night or [in the] early hours of the morning.'

'I got a call on New Year's Eve. The student was asking for a scope of the supplementary examination paper that she was going to write. This is frustrating.'

Lecturers indicated that their telephones are inundated with calls, and sometimes it looks like a switchboard where they would be answering calls for almost the whole day. Consequently, their research activities suffer. Moreover, some indicated that students do not respect office hours. Other lecturers cited the fact that students call them on weekends when attending church or funeral services of their loved ones. This has had negative repercussions because some lecturers ended up with broken families and are either separated or divorced.

4.6 SMS and WhatsApp

Although WhatsApp appears to be a good tool to use for online classes, it has its drawbacks, and students should familiarise themselves with the tool before jumping into the deep end. WhatsApp is a strange but intriguing concept. It is worth noting that WhatsApp was launched in 2009. As long as there is a Wi-Fi connection, it can

be viewed as a free multi-platform messaging app that enables users to share their status, send and receive text and voice note messages and make and receive voice and video calls at any time of their choice (Dziuban et al, 2018).

This app is appealing because it works across various mobile phones and computer operating systems, so a user can continue with the conversation anytime and anywhere. It can also take advantage of Wi-Fi and cellular data to make one-on-one or group calls, thereby reducing the need for expensive call charges (Fredericks & Alexander, 2021).

Important short message services (SMSs) and notices are sent to students from time to time. Lecturers with big classes of 8 000+ students lamented about students who keep sending them 'call back' requests. Sometimes they send an SMS and expect speedy responses from the lecturer. Just as with computers, there are health risks associated with spending too much time in front of mobile phone screens. The convenient small screen on mobile phones can be viewed as a demerit, as reading documents on a small screen can lead to eye strain. It is vital to ensure an appropriate balance between screen use and interpersonal communication.

Some lecturers indicated that the minute students notice that a lecturer is online, they start sending WhatsApp voice notes. Sometimes they send thought-provoking messages irrespective of the stipulated time for student-lecturer interactions. Additionally, students make WhatsApp videos and voice calls at awkward hours.

In short, it can therefore be extrapolated from this theme that despite the unbelievable value of mobile phones in learning activities, they tend to negatively

affect the lecturers at Open Distance and e-Learning institutions. This theme backs the study of Khateeb (2020), where it was disclosed that the use of mobile phones is one of the leading causes of adverse effects on students across all levels because of their addictive nature, which shifts students' focus from their studies.

Table 3: Challenges for lecturers

• Telephone calls and WhatsApp hours
• Call backs
• Ignorance of messages
• Passive participation
• Requests for deadline extensions
• Technological incompetence

In this study, the researchers attempted to convey particularised and collective experiences by adopting interpretive phenomenology. This methodology is regarded as compatible with a broad range of teaching and learning activities. To construct an understanding of the usage of phenomenology and the phenomenological methods used in the study, the researchers curdled the analytical lens on phenomenology to holistically explore the challenges and welfare of its adoption in the study. Despite the different contexts and participants, phenomenology provided a means for driving the study (Moran, 2019). Phenomenology is thus utilised primarily as a methodological approach to illuminate lived experiences, particularly in the professions, including education. It has also occasionally provided possibilities for articulating teaching and learning theories in close relation to concrete practice (Husserl, 2019).

5 CONCLUSIONS AND RECOMMENDATIONS

The aim of this study was to explore and highlight an interpretation of the lived experiences of a phenomenon. The findings of this study portray the summation of the researchers' interpretations and the lived experiences of the lecturers, and therefore

invite further exploration of the meaning of the phenomenon of threshold notions in online communication. This study was based predominantly on interviews, and it was imperative that the six participants articulated their lived experiences in their interviews. To this end, the scope of the study included significant themes that influenced the lived experiences of the concomitant issues related to the participants. Therefore, the findings and conclusions are highly swayed by the study population and the time frame allocated for data collection. While exertions were taken to maximise credibility and dependability, it was inevitable that this study's findings were persuaded by the fact that the participants agreed to be interviewees, as the participants in this study were interested in and comfortable with sharing their experiences.

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Dimensions of The Lived Experiences of Doctoral Students In South Africa

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ABSTRACT

Students engage in their postgraduate studies with an accumulation of experience and knowledge. The autonomy and independence that postgraduate studies call for represent a drastic shift from the norms that students are accustomed to. This study examined the dimensions of the lived experiences of doctoral students in South Africa which influence their independence and autonomy. The importance of this study resides in its examination of the multiplicity of challenges that doctoral students experience throughout their journey, as identified through the various dimensions of their lived experiences. The contribution of this study is relevant to the reflection on extant practices of postgraduate engagement at universities in S.A. The participants in this study comprised a convenience sample of seven postgraduate students currently registered for their PhD qualification. Data was gathered using an open-ended self-reporting questionnaire. Through a content analysis, several themes emerged such as personal development, group engagement, and the role of the supervisor. The study's findings underscore the need for a more comprehensive and supportive approach towards doctoral students in South Africa. It is recommended that whilst doctoral students engage independently in their studies, there is need for the institution to provide scaffolding support across the dimensions this study identified.

Keywords: Lived Experience, Peer Support, Personal Issues, Phenomenological Study, Postgraduate, Supervisor Support.

1 INTRODUCTION AND BACKGROUND

Students who embark on their postgraduate studies begin with a range of prior experience, knowledge, cultural norms and learning styles (Brown & Holloway, 2008; Smith & Khawaja, 2011), yet the transition demands that students adapt to a very different environment from their undergraduate experience. Many postgraduate students struggle to complete their degrees on time due to a range of issues, including personal, administrative, peer and supervisory support. The autonomy and independence that postgraduate studies call for is a drastic shift from the norms to which students are accustomed. These norms include learning

styles, planned lectures and dependency on the lecturer for guidance, where frequent consultations occur. However, the postgraduate experience differs in many ways. Kinash and Crane (2016) report barriers to transition similar to those commonly reported by first-year undergraduates. Despite these transitional barriers being reported, institutions fail to provide specific support to enable postgraduates to resolve these issues, resulting in both student and staff dissatisfaction. Coneyworth, Jessop, Maden and White (2020) conducted a study that looked at improving the experience of postgraduate students that followed a structured doctoral program in higher education. Self-reported challenges faced by postgraduate students included more

than 50% of respondents identifying difficulties associated with adapting to new learning styles and a new learning environment.

The overall postgraduate student experience requires research that examines the dimensions that include, but are not limited to, personal issues/experiences; funding; administrative issues; peer support and supervisory support. The South African context of the study will highlight the lived experiences of postgraduate students in order to better understand student experiences. Evans, Nyguyen, Richardson and Scott (2018) advise that there is a need to look beyond the ability of students to cope with educational anxieties and the role of institutional staff in this process, towards also considering the wider constrictive influences at play for postgraduate students, such as home life. The study focuses on five dimensions of the lived experiences of postgraduate students in order to understand the notion of the disparity between received and perceived support (Cohen & McKay, 1984). Sitch and Lowry's (2019) study examining the social influence on students' experiences of transition into postgraduate study found that students do experience a within-education transition from undergraduate to Master's level study, and that this transition may be stressful for some and may be a period of uncertainty for students, thus impacting on their personal and academic lives. Mouton (2001) points out that personal problems can be the difference between failure and success at the postgraduate level. In another study by Ali, Ullah and Snauddin (2019) which looked at postgraduate research supervision, students were normally not satisfied with the research supervision they received and labelled it 'bad' due to various reasons, such as a lack of supervisors' interest in the students' work poor commitment to pre-arranged meetings; and inactiveness in providing timely constructive feedback.

Challenges experienced by postgraduate students in South Africa are not unique to those experienced by students from other countries. However, the use of phenomenology provides a useful framework for examining the lived experiences of postgraduate students in South Africa. It can help to explore the subjective meanings that students attach to their academic experiences, including the quality of supervision, the availability of resources and the demands of the qualification. Husserl's concept of the "lifeworld" (Husserl, 1962) is useful to examine the ways in which postgraduate students experience their environment and the structures of their experiences. Heidegger's notion of the "being-in-the-world" (Heidegger, 1962) can assist researchers to explore the ways in which postgraduate students engage with their studies and the meaning that they attach to their experiences. Merleau-Ponty's notion of the "lived body" (Merleau-Ponty, 1962) emphasizes how the embodied experiences of postgraduate students and the ways in which their physical and emotional experiences are intertwined (Higgs & Titchen, 2014). Local scholars like Koopman and Koopman (2018) have also made important contributions to phenomenology. In particular, their argument is that education should focus on lived experience and the body in dialogue with the world which aligns with the phenomenological and existential philosophies of Husserl, Heidegger, and Merleau-Ponty. It challenges the Western framework of thinking that separates the body and mind that emphasizes a consumerist market-driven approach to education.

This study aims to shed light on these issues and provide valuable insights into the lived experiences of doctoral students in South Africa. The main aim of this study is therefore to determine how the dimensions of their lived experiences influence doctoral students in South Africa.

To this end, the following objectives are considered:

- To determine the challenges experienced by doctoral students in South Africa; and
- To ascertain how doctoral students achieve autonomy, competence and relatedness through the dimensions of their lived experience.

2 LITERATURE REVIEW

The literature examines the dimensions of Personal Issues, Funding, Administrative Support, Peer Support and Supervisory Support experienced by doctoral students. These dimensions are supported by other researchers' investigations into the postgraduate student experience and have found personal, financial, institutional, supervisor related, non-academic, and other factors to be connected to research skills and academic performance (De Zoysa, 2007; Grant, 2005; Meerah, 2010; Wareing, 2009). Personal issues are considered to be one of the most significant factors affecting postgraduate students' success. Several studies (Boado & Richards, 2020; Al-Saggaf & MacCorron, 2017; Robertson & Smith, 2015) identify that personal issues such as time management, stress and isolation, and family responsibilities can have a detrimental effect on postgraduate students' success. Boado and Richards (2020) argue that postgraduate students who experience personal issues may have a lower motivation to complete their studies, leading to delays in graduating or higher attrition rates.

A lack of funding can prevent students from pursuing postgraduate studies or force them to drop out if they cannot afford to pay for their studies. The cost of postgraduate studies in South Africa is high, and most students rely on bursaries or scholarships to fund their studies (Mayekiso & Mtsweni, 2019). The authors argue that the lack of funding can lead to high levels of stress and anxiety, affecting

students' well-being and academic performance. Other studies carried out by De Zoysa (2007) and Meerah (2010) found that the availability of funds affected student performance. Higher funding in private schools leads to efficient management, highly motivated teachers, and access to resources. Those are the key factors to positively affect postgraduate students' performance. In South Africa, the National Research Foundation (USAF, 2021), recently reported on a shortage of funding to support postgraduate students. Regarding extensions for the completion of Masters degrees, of 1 555 applications, 848 (54%) were approved. At doctoral level, 239 (67%) of the 356 applications received were approved. (USAF, 2021). However, the demand for extension support for Masters and Doctoral students seems to be on the rise. This could be attributed to a combination of factors addressed in this study. The lack of funding can affect the progress of a postgraduate student in several ways which may include delayed completion (Cloete, 2017), reduced quality of research (DeVilliers, 2016), limited opportunities (Naidoo, 2019), as well as mental and emotional issues (Strydom, 2018).

Administrative support is critical, particularly for those students who are new to the postgraduate environment. This includes access to resources, timely feedback and clear communication channels (Crossouard & Pryor, 2017). The authors argue that postgraduate students who do not receive adequate administrative support may experience a lack of clarity in their studies, leading to stress and anxiety. A study by Johnson and Huwe (2013) found that postgraduate students who perceived inadequate administrative support reported lower levels of progress towards completion. In a separate study by Ngaruiya, Ngaruiya and Wambugu (2018), postgraduate students reported frustration with the lack of administrative support in accessing resources such as funding and

library facilities. These challenges hindered their research progress, leading to delayed completion of their programs. A research paper by Kopp and Zinn (2019) examined the impact of administrative support on postgraduate students' satisfaction with their academic experience. The authors found that students who perceived inadequate support were less satisfied with their programs.

Peer support refers to the social and academic interactions between students who are studying in a similar program or research area. This includes mentorship, networking opportunities, and academic support from fellow postgraduate students (Delange-Ros and De Waal, 2020). The authors argue that postgraduate students who do not have adequate peer support may experience a lack of belonging, leading to a lower motivation to succeed. In a study conducted by Andrews and Clark (2011), postgraduate students who reported higher levels of peer support also reported higher levels of academic achievement. Zahn, Perry, Hesse and Foster (2017) found that peer support can reduce stress and increase well-being. Moreover, the postgraduate experience is stressful and challenging, and having a supportive network of peers can provide emotional support and reduce feelings of isolation and anxiety. Vajoczki, Savage, Vujovic and Budreau (2016) maintain that peer support can improve research productivity as postgraduate students are often engaged in research projects, working with peers, which can help them develop research skills. Conversely, Andrews and Clark (2011) state that the lack of peer support can hinder postgraduate student progress as students may feel isolated and struggle to understand course materials or even make progress with their studies.

In studies conducted by Chireshe (2017) and Grant, Hackney, and Edgar (2014), the researchers argue that an effective learning experience depends on the regularity of meetings between

supervisors and students, guidance, an encouraging attitude of supervisors and a friendly mentoring relationship. Gill and Bernard (2008), Sally (2008) as well as Zhao, Golde and McCormick (2007) concur that an effective supervisor/student relationship is essential towards the success of postgraduate students. In a study conducted by Ali, Ullah and Sanauddin (2019), they found that supervisors carry heavy workloads, which often meant supervisors were too busy to engage with their students in a meaningful way. Moreover, Kimani (2014) argues that the busy schedule of the supervisor compromises quality research which reflects a lack of commitment and shows non-professionalism in academics. A study by Hutchinson and Lawrence (2019) identified several factors that contribute to postgraduate student success, including access to support and resources, clear expectations and guidance from supervisors and a positive academic culture. Research has shown that the relationship between supervisor and student can impact students' motivation and persistence (Peters & Pascarella, 2001). More importantly, scholars have highlighted the importance of supervisors having the necessary skills and knowledge to effectively support postgraduate students (Mainhard, et al., 2018).

3 THEORETICAL FRAMEWORK

The Self-Determination Theory is applied as the theoretical lens through which the five dimensions identified in this study are perceived. This is a theory of human motivation where individuals are viewed as being proactive (Ryan & Deci, 2017). According to Deci and Ryan (1985), the Self-Determination theory focuses on the basic human needs of autonomy, competence and relatedness. The theory proposes that individuals are most motivated and engaged in activities when they feel a sense of control over their actions (autonomy); when they perceive that they can achieve their goals

(competence); and when they feel a sense of connection to others (relatedness). Intrinsic motivation is autonomous and refers to performing an activity for its own sake, for the pleasure and satisfaction it provides (Ryan & Deci, 2000). Extrinsic motivation refers to performing an activity for instrumental reasons rather than for its intrinsic qualities. According to SDT, various types of extrinsic motivation exist and they differ in their degree of self-determination or autonomy (Ryan & Deci, 2000). The findings of a study by Howard, Bureau, Guay, Chong and Ryan (2021) highlight that intrinsic motivation is related to student success and well-being.

In the context of postgraduate studies, SDT can be applied to understand how personal issues, funding, administrative support, peer support and supervisory support affect postgraduate students' motivation, engagement and academic performance. Personal issues such as time management, stress, isolation and family responsibilities can affect postgraduate students' autonomy, competence and relatedness. Students who struggle with personal issues may have lower motivation to complete their studies, leading to delays in graduating or higher attrition rates. Funding also affects postgraduate students' autonomy and competence. Without sufficient financial support, students may struggle to pay for tuition fees, books, accommodation, and other necessary expenses. Administrative support is important for postgraduate students to feel competent and supported in their studies. Moreover, peer support is essential for postgraduate students to feel related and connected to their academic community. Students who do not have adequate peer support may experience a lack of belonging, leading to lower motivation to succeed. Finally, supervisory support is important for postgraduate students to feel competent and autonomous in their research.

4 METHODOLOGY

4.1 Research Design

The nature of the main aim of the study led to the selection of a qualitative approach that is informed by the Interpretative Phenomenological Approach (IPA). According to Smith and Osborn (2015), IPA is a qualitative approach that seeks to provide detailed examinations of personal lived experiences. The primary goal of IPA is to investigate how individuals make sense of their experiences (Pietkiewicz & Smith, 2012). Moreover, IPA researchers attempt to understand what it is like to stand in the shoes of the subject and, through interpretative activity, make meaning comprehensible by translating it. The importance of IPA as a qualitative research approach is its ability to examine and interpret the 'lived experiences' of research participants (Smith, Flowers & Larkin, 2009). The study aims to first describe the poorly understood aspects of experiences (following Husserl's approach) and thereafter examine the contextual features such as the broader situational factors of the experience in relation to other influences (Matua & Van Der Wal, 2015) by interpreting the lived experiences of postgraduate students in South Africa. This will allow for a deeper understanding of the lived experiences to extract the requisite knowledge to address the aim of this study.

4.2 Rigor and Trustworthiness

To prevent research bias in the phenomenological study, the researcher ensured that her own views, experiences and opinions were bracketed. This also prevented any influence on the participants' lived experiences. The researcher remained attentive and open to the experience of the participants and described the phenomenon in detail as it was experienced. Chan, Fung and Chien (2013) recommend putting aside all the researcher's own knowledge and adopting this attitude throughout the research.

In order to circumvent the issue of bias and to enhance credibility and

trustworthiness, the researcher applied reflexivity, which is a self-reflective process, alongside bracketing that enabled the researcher to critically examine her own assumptions, interpretations and experience in relation to the current study. By using reflexivity, the researcher was able to make a conscious effort to minimize her influence on the research process and outcomes. This approach helped to enhance the rigor and trustworthiness of the findings by promoting a more objective and transparent research process.

4.3 The Measuring Instrument

The research instrument employed an open-ended self-reporting questionnaire. Whilst phenomenological studies primarily use interviews, focus groups and observation as a means of collecting data, the researcher opted to implement the use of a self-report questionnaire. Studies conducted by Baran and Ozogul (2021) that focused on the metaphorical perceptions of active tourist guides implemented a semi-structured questionnaire, as did a study by Orengo, Holanda and Goto (2020) whose objective was to evaluate the understanding

of Brazilian psychologists on Phenomenology. With self-reporting questionnaires, the participants retrospectively evaluate aspects of their subjective experiences in general, or the quality of a given experience in particular. This captures their experiences and the phenomenon (Pekala & Levine, 1982).

The questionnaire comprised the five dimensions, with broad open-ended questions aligned to the respective dimensions to maximize the coverage of specific aspects of the lived experience. The objective in applying this approach was to elicit the specifics of the lived experiences of the postgraduate students.

4.4 Participants and sampling strategy

Ethical clearance was obtained prior to the recruitment of participants. Participants were selected using a non-probability convenience sampling strategy. They were first contacted via an email informing them of the study, seeking their written permission to participate. Seven postgraduate students who are in various stages of their Doctoral studies agreed to participate

Table 1: Participant details

Participant	Gender	Qualification	Current Status
1.	F	Masters in Commerce	PhD – year 1
2.	F	Masters in Retail Management	PhD- year 2
3.	F	Masters in Marketing Management	PhD- year 3
4.	F	Masters in Commerce	PhD – year 2
5.	F	Masters in Communications	PhD – year 1
6.	M	Masters in Marketing Management	PhD- year 4
7.	M	Masters in Marketing Management	PhD- year 4

4.5 Data Collection and Analysis

The self-report open-ended questionnaire was emailed to participants once they were briefed on the study and granted permission for their participation. Participants were given two weeks within which to provide their responses.

The data was analysed using Colaizzi's (1978) seven-step approach, used in phenomenological studies. These steps were adapted to cater for the current study. The choice of using Colaizzi's method seemed appropriate as the research focused on understanding the meaning of

the experience as it is lived by the participants. This is because Colaizzi's method emphasizes a systematic approach to extracting and organizing meaning from the data, which may be well-suited for the research questions that required a detailed examination of the participants' experience. The researcher examined participants' responses to understand the experience of each participant with the various dimensions outlined. This entailed reading and re-reading each script to acquire a sense of the participant's experience. Thereafter, significant statements made by each participant were extracted to contribute towards a sense of meaning. Meaning was then attributed to the extracted data. The purpose here was to gain an understanding of the subjective meaning of the participant's everyday lived experience as a postgraduate student within the dimensions outlined. This was aided by providing a textural description of the participant's experience, as well as a structural description that included the context in which these experiences were lived. Although the dimensions separated each aspect of the individual's lived experience, the themes generated within these dimensions depicted their interrelationship. The data was coded using the various dimensions addressed in the study to form categories for the themes. Thereafter, common words used by participants were codified and emergent themes were elicited from the common words. This led to the identification of the fundamental phenomena experienced by participants. The common words did not reduce the individual lived experiences of the participants. Instead, they showed commonalities that exist in the experiences of postgraduate students. These are discussed in the results below.

5 RESULTS AND INTERPRETATION

The dimensions used in the self-report were to enable participants to respond to the objectives of the study. Five themes emerged from the responses of the

individual experience of the postgraduate students. It is important to note that whilst all of the participants are currently busy with their Doctoral studies, the study also considers their experience during their Masters studies.

Theme 1: Personal Development

Personal Development emerged as a composite theme from the sub-themes derived from the responses to questions regarding the personal challenges that postgraduate students faced. These are identified as: Growing pains; Adapting to Change; Negotiated Compromise; Requesting Support; Need for Developed Independence and Managing the transitioning Process.

Growing pains appeared as a sub-theme from responses to the question on the personal challenges experienced during postgraduate studies. The participants reported mental health challenges; difficulties in finding a balance between work and home; lack of support; funding issues and feeling inadequate. The coping mechanisms used by the participants included allocating dedicated time to research; planning; prioritizing and making sacrifices.

Adapting to change was also identified as a sub-theme, which helped participants overcome the challenges they faced. This theme aligned itself with students achieving autonomy and competence by enabling change in their circumstances.

The sub-theme of *Negotiated Compromise* emerged from the responses to the question on how participants coped with their responsibilities at home, work and as students. Participants reported seeking assistance from friends in academia; attending workshops; struggling to keep their heads above water and introducing activities such as going to the gym.

The sub-theme of *Requesting Support* emerged from responses to the

question on seeking assistance from the university's student counsellor, with some participants reporting not being aware that support was available.

The *Need for Developed Independence* emerged from responses on how students managed the shift to studying independently. Participants reported feeling challenged, needing motivation, and being comfortable working on their own. *Managing the transitioning process* was identified as a sub-theme from responses on how the shift to studying independently made participants feel, with some reporting feeling proud, frustrated or anxious.

The findings indicate that postgraduate students experienced challenges. However, they adapted, negotiated, sought support, and developed independence to overcome the challenges to achieve personal growth, which speaks to the psychological need for autonomy.

Theme 2: Self-Sufficiency

The responses indicate that students tended towards being self-sufficient and managing their expenses within their allotted funding. It was observed that postgraduate students require financial support to cover their research expenses, which may vary depending on the nature of their studies. Some of the funding sources mentioned included scholarships; bursaries; financial support from parents and extra jobs. However, the question of whether the funding was sufficient or not depended on the costs associated with the specific study. International students faced severe constraints and had limited options when it came to funding, which often drove them to take on additional jobs to finance their studies. These findings highlight the importance of financial support for postgraduate students and the need for more options and resources to help international students overcome funding challenges. Providing adequate financial support can promote students' autonomy and

competence, enabling them to focus on their studies and achieve their goals.

Theme 3: Delayed Progress

The theme, *delayed progress*, was identified under the Administrative Issues dimension and was attributed to difficulties experienced during registration and the proposal review process. Responses indicated that delays outside of the students' control created disruptions and frustrations in their progress. Some universities offer proposal development workshops to assist students, but responses to a related question indicated that participants did not find these workshops helpful, with some experiencing confusion due to varying levels of understanding of research methodology concepts. To determine where the bottleneck exists for postgraduate students, participants were asked which area caused them the longest delay. Responses included research methodology, topic development, proposal development, and registration. Identifying problematic areas can lead to providing necessary assistance to students. Participants were also asked to suggest ways to facilitate administrative processes related to postgraduate studies. Responses included providing support, carefully timed orientation, more faculty staff, defined structures and procedures for students to follow, and a more interactive proposal development workshop.

Theme 4: Group Engagement

The Peer Support dimension emerged as one of the most impactful dimensions in the study. Participants expressed a strong need for peer support, with group engagement emerging as an important theme from their responses to the question: "Please explain if you think joining a peer support group would have made your Masters/Doctoral experience more pleasant?". All participants indicated that joining a peer support group would make their journey more enduring, provides a sense of solidarity, enables them to learn

from others, and helps them manage feelings of being overwhelmed. The SDT suggests that relatedness is essential to promoting motivation and well-being. Peer support can fulfil this need, just like supervisory support. By engaging with like-minded individuals, students can address various matters that may hinder their progress. Participants response to how joining a peer support group would help them, were similar, indicating that peer support would help them feel motivated, less lonely, and less isolated. Participants who were not part of a support group indicated that they improvised by seeking help from friends or networking with academics and others ahead of them. By fostering peer support groups, universities can help students fulfil their relatedness needs and promote their motivation and well-being in line with the Self-Determination Theory.

Theme 5: The Important Role of Supervisors

Supervisors play a critical role in supporting postgraduate students in their academic journey and their impact on student success cannot be overstated. The responses to the question, “What was your overall experience with your supervisor?” were mixed, with some students reporting positive experiences, while others felt unsupported and treated unprofessionally. Supervisors’ behaviour and support can have a significant impact on students’ motivation, engagement, and satisfaction with their studies. The responses to “What challenges did you experience with your supervisor?” revealed communication, workload and support were significant challenges for some students. It is essential for supervisors to understand the challenges students face and be equipped with the necessary knowledge and expertise to guide them through their academic journey. Students need to feel supported and heard by their supervisors and supervisors must provide timely and constructive feedback to help students progress. To understand the

level of relationship between students and their supervisors, the participants were asked if supervisors were made aware of the challenges they faced. The responses varied, with some supervisors showing indifference or lacking understanding of the issues students faced. To be effective, supervisors must be aware of the challenges their students face and work to support them in addressing these challenges. The last question was based on whether students sought assistance from their supervisors regarding personal issues or challenges. The responses indicated that some supervisors were unapproachable, while others provided the necessary support and much needed guidance.

6 DISCUSSION

Themes generated from the responses to the five dimensions identified in the study provide an overview of the challenges that doctoral students face. Through the application of the SDT that focuses on the psychological skills of the individual, doctoral students were able to apply themselves towards achieving autonomy, competence and relatedness. The study makes an important connection between these dimensions and the emergent themes using the SDT. Personal development highlights the complexities of postgraduate studies which are unique to each participant. Postgraduate studies can be a highly demanding and stressful experience that can negatively impact mental health and cause fatigue. Sharma, Mor, Gard, Chhikara, Pal and Narula (2021) suggest that individual, family-related and job profile-related factors can affect the work-life-study balance. Doctoral students can create a sense of autonomy over their study schedules, which may help them feel more motivated, engaged and in control of their academic progress. They can set their own goals and seek support to manage the challenges that may hinder their personal development. This includes taking charge over financial issues by seeking out alternative sources of funding towards

becoming self-sufficient. Denying funding to research students in particular areas can limit the development of research capacity and produce a shortage of skilled, qualified individuals. Students also face challenges with navigating complex administrative processes, accessing resources and communicating effectively with staff members. Additionally, bureaucratic challenges, inadequate resources, communication breakdowns and lengthy proposal reviews lead to unprecedented delays and disillusionment for doctoral students. Students may feel isolated or disconnected from their peers, which can impact their motivation and well-being. The motivating factors for peer support or group engagement are the opportunities to share and improve knowledge and expertise (Bugaj, Blohm, Schmid, Koehl, Huber & Huhn, 2019). Peer support can provide writing support (Ferguson, 2009); develop information literacy (Green, 2006); and influence the likelihood of completing the qualification. Group engagement can also foster self-motivation, which helps students maintain momentum, track progress and feel motivated by the knowledge that they are going through the same struggles. Students face challenges with accessing sufficient support and guidance from their supervisors and may experience communication breakdowns or conflicts with their supervisors. Some researchers (Atieno Okech & Rubel, 2007; Kiley, 2011) maintain that the cause of delays is a lack of supervisory training. The gap between low completion rates of research work and high completion rates of research work can be minimized through conducting workshops, seminars and training. Sarwar, Shah and Akram (2018) posit that the working relationship between supervisor and student, workload of supervisors as well as institutional-related factors add to the delays experienced by postgraduate students. The supervisory relationship is primary for ensuring that a wealth of personal and cultural issues, as well as experiences, are addressed so that students

are guided and empowered to be autonomous learners, engaged to gain their postgraduate qualifications (Wisker, Robinson, Trafford, Warnes & Creighton, 2003). Furthermore, the distinguished role of the supervisor emphasizes the importance of the supervisory relationship in ensuring that doctoral students are guided and empowered to be autonomous and competent students.

The emergent themes identified in the study are related to the five dimensions of the lived experiences of doctoral students in South Africa, highlighting the complex and multifaceted nature of the challenges faced by doctoral students. The general findings include:

- Personal development is crucial towards students achieving autonomy and competence.
- Participants' tendency towards managing their expenses within their allotted funding was another key finding that the study makes.
- Delayed progress emerged due to difficulties in the administrative processes, particularly registration and proposal review.
- Group engagement highlights the need for peer support to fulfil the relatedness needs of doctoral students.
- The important role of supervisors emphasized their critical role in supporting doctoral students in their academic journey.

The findings indicate that learning needs to be supported through various avenues such as informal social networks, which is very well documented in undergraduate contexts (Briggs, Clark & Hall, 2012; Christi, Tett & Cree, 2016; Wilcox Winn & Fyvie-Gauld, 2005; Xuereb, 2014).

7 CONCLUSION

This study aimed to investigate the dimensions of the lived experiences of

doctoral students in South Africa and to shed light on the challenges that they face. The study emphasizes the importance of supporting and mentoring doctoral students. Supervisors play a critical role in providing support to doctoral students, and addressing issues related to personal development, funding and peer support. This study's themes offer a broader perspective that can be used to inform larger studies, encompassing a more extensive sample of doctoral students. The study's findings underscore the need for a more comprehensive and supportive approach towards doctoral students in South Africa. The study also identified some paradoxes, such as the fact that students who were most successful academically were not necessarily those who received the most support. Furthermore, there was a disconnect between the support that students perceived they were receiving and the support that they actually received. The study had some limitations, including the fact that the sample size was small. To address the challenges faced by doctoral students, it is recommended that universities provide specific support for doctoral students, such as mentorship programs, funding and academic support. Indeed, further research is needed to explore the challenges faced by doctoral students in other contexts and to identify effective interventions to support them. Additionally, larger sample sizes and multi-institutional studies can provide a more comprehensive understanding of doctoral student challenges and lived experiences.

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Lived Experiences of Selected Grade Seven Teachers' Integration of Democratic Values into Their EMS Lessons

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ABSTRACT

This study investigates the lived experiences of Economic and Management Sciences (EMS) teachers and how they integrate democratic values into their lessons. The study focuses primarily on EMS teachers' understanding of what democratic values are and how they were implicitly integrated into certain EMS topics. Methodologically, the study employed a Husserlian phenomenological approach to the data-construction process in which interviews and fieldnotes were the main sources of data. This approach assisted the researchers in eliciting rich descriptions of the teachers' experiences on how they integrate democratic values into Grade 7 EMS lessons. A total of 5 EMS teachers were purposively selected to participate in the study. Theoretically, the study draws on Husserl's 'lifeworld' theory and Heidegger's interpretive phenomenology with a focus on *Dasein*, which has been integrated with Karl Maton's Legitimation Code Theory (LCT). The findings revealed that the teachers all integrated democratic values into their lessons. Their lessons were both rich in semantic gravity (SG+) and semantic density (SD+). From a Heideggerian perspective it showed how these values were cemented in their consciousness as part of their "Dasein" ("being there") as children. The findings could help expand our understanding of what goes on in the minds of EMS teachers when they teach democratic values.

Keywords: Economic and Management Sciences, Grade 7, teachers, phenomenology

1 INTRODUCTION

Economic and Management Sciences (EMS) is a school subject taught in Grades 7, 8 and 9 in South Africa (DoBE, 2011). According to the Curriculum Assessment Policy Statement (CAPS) for the Senior Phase, EMS as a school subject can be defined as follows:

... the efficient and effective use of different types of private, public or collective resources to satisfy people's needs and wants. It reflects critically on the impact of resource exploitation on the environment and on people. It also deals with effective management of scarce resources in order to maximise profit (DoBE, 2011, p.4).

One of the main aims of EMS as a school subject is to "equip learners with real-life skills for personal development and the development of the community" (DoBE, 2011, p. 8). Thus, the main objective of EMS is to produce a learner who has the knowledge and skills set that can advance sustainable growth both for herself and for the community in which she resides. Therefore, when teaching EMS, teachers are expected to adopt learner-centred teaching approaches that are innovative and contextually relevant (Van Wyk, 2019). All seven principles stipulated in the CAPS promote the development of an informed learner who must become a responsible citizen (DoBE, 2011). For example, the curriculum promotes 'active

and critical learning' with a focus on enhancing 'high knowledge and high skills' in the subject, while teachers should take the importance of advancing 'social transformation' into account (ibid., p. 4).

The aim of this study is to investigate *the lived experiences of selected Grade 7 teachers in integrating democratic values into their EMS lessons*. A related aim is to determine the teachers' understanding of democratic values and how they prioritize these values in their pedagogical practices. Thus, the main objectives of the study are threefold: (i) to gain insight into Grade 7 EMS teachers' mental disposition toward democratic values, (ii) to gain access to their subconscious awareness with regard to the value they place on democratic values, and (iii) whether they are actively integrating these values in their lessons. Consequently, this phenomenological investigation methodologically draws on Husserlian phenomenology and relies on Heideggerian phenomenology to provide an interpretive description of the lived experiences of the teachers. The main reason for adopting a Husserlian phenomenological approach is to gain insight into the consciousness of Grade 7 EMS teachers for the sake of deeper insight into their being. More specifically, the study is focused on ascertaining why they do what they do when they teach democratic values. Given the dearth of phenomenological studies in South Africa that examine EMS teachers' understanding and integration of democratic values into their lessons, this study could add value to the existing body of literature on phenomenological EMS studies and provide a deeper understanding of the pedagogical practices of selected teachers when teaching democratic values

2 LITERATURE REVIEW

2.1 Brief Review of South African Studies on EMS

As we were searching for the literature on democratic values in EMS, we found what appears to be a paucity of studies on how Grade 7 teachers integrate democratic values into their EMS lessons. EMS teachers in contemporary South Africa are confronted with the challenge of preparing their learners adequately for becoming effective citizens in a democratic society. As an EMS pre-service teacher educator (first author) and an EMS teacher (second author), this is a troubling reality, as we often engage with many of our colleagues and peers through personal conversations about how to prepare our learners for living in a democratic society, and particularly on how to integrate democratic values into our lessons. Many state that all they are concerned with is to complete their prescribed curriculum so that their learners can be ready for tests and examinations. A study conducted by Johnson and Van Wyk (2016) substantiates this claim, as they report that most teachers adopt a teacher-centred approach with little space provided for in-depth discussion with learners. This concern motivated us to investigate the lived experiences of Grade 7 EMS teachers and how they integrate democratic values into their lessons. As a starting point we thought we should first ascertain what the literature has say about research conducted in EMS or its related disciplines in the field.

A phenomenological study conducted by Schreuder (2009) reported how EMS teachers prepare learners for Accounting in Grade 10. One of the key findings of her study revealed that many EMS teachers are under-qualified to teach the Accounting aspects of the subject. In a phenomenological investigation into the lived experiences of FET Accounting teachers, Koopman (2018; 2020) reports on

the many challenges teachers face in implementing the curriculum. The investigation found that (i) the teachers' pedagogical strategies were outdated, (ii) poor teacher support was provided by the principals and officials from the Department of Education, and (iii) learners experienced a lack of motivation for their studies. Another South African study by America explores how EMS teachers understand sustainable development in relation to their teaching practices and revealed that "the EMS teachers' dominant conception is associated with notions of unparalleled economic growth with a limited reference to the interrelatedness of the economy, society and the biophysical world or to the incorporation of green issues" (2014, p. 159). The study highlighted the importance of adopting an integrated approach with regards to education on sustainable development in the EMS curricula or discourse (ibid.). Moreover, Mokgosi, De Jager and White (2018, p. 94), who investigated the effectiveness of EMS teachers' teaching/learning by using the lesson study approach, reported that "the lesson study model played a role in building an EMS community of practice, and developed teachers' interpersonal and intrapersonal skills, pedagogical competencies, research skills, and reflective and analytical skills". A recommendation that flowed from Mokgosi, et. al's study pointed out that a professional development programme for EMS teachers should be offered to teachers that should focus on differentiated teaching skills. By focusing on differentiated teaching skills, teachers will be able to improve the "deep learning of diverse learners in the classroom" (Mokgosi et al, 2018, p. 94).

Numerous South African studies across disciplines show that traditional teaching approaches are still the norm, as teachers aim to deliver their content so that learners can pass the examination (See America, 2014; Koopman, 2018, 2017;

Koopman & Koopman, 2021). While teachers were used as powerful cogs in the machine to promote apartheid, they can also be used to promote democracy and democratic values. One way to do this is to devise effective ways in which to integrate democratic values (such as social justice, honesty and respect, truthfulness, accountability and equality) into the Grade 7 EMS curriculum to try and restore the damage that was inflicted on the people of South Africa and to enhance democratic citizenship. By promoting democratic values in the EMS curriculum, a sense of wisdom could be instilled in young children to understand the impact of selfish behaviour. Furthermore, it will enable them to participate, contribute to, adapt and survive in a very complex economic world that affects the livelihoods of others. This brings us to the question: What are values?

2.2 Meaningful Integration of 'Values' Into The Ems Curriculum

Fataar and Solomons (2010) posit that value is a fluid concept that can be interpreted in many different ways. Values can be described as guides toward an action or the moral compass that we use to navigate our interactions with members of society (ibid.) Values are judgments that are based on what is regarded as correct and what is seen as wrong. Fataar and Solomons (2010) explain that values are also seen as involved in making decisions that are morally correct, after which one acts accordingly. Hill (cited in Green, 2004, p. 108), posits that values are "beliefs that are held by individuals and to which they attach special priority or worth, and by which they tend to order their lives". Rhodes, Bernard and Roux (2004) argue that a value can be compared to a belief that establishes a value of a principle that is rooted in a person or a group, a religion or a belief system. The beliefs of learners can be influenced by the teacher when teaching a subject such as EMS.

The Manifesto of Values recognises that values, which focus on language and culture, are familiar currency to make life important and to teach values at school that aims to help young people achieve higher levels of moral judgement, therefore enriching the individual and enhancing their value to society. This is indicative of the importance of 'teaching' a set of clear values to uplift our society (James, 2001). Therefore, teachers need to cultivate a good understanding of democracy in their learners and the importance of democratic values in engaging with the world. By doing so, they are critically engaging their learners in the classroom through discussions to be actively involved in the lesson. Acting responsibly is when learners learn how to be accountable for their decisions as they learn the significance of what it means to act responsibly in the classroom (Davids, 2018). The focus when teaching democratic values needs to be based on the fundamental values of the Constitution and its relevance to education (James, 2001). These values in the Constitution reflect the morality and perceptions of democracy, social justice, equality, non-racism and non-sexism, *ubuntu* (human dignity), an open society, accountability, responsibility, the rule of law, respect and reconciliation. These values found in the Constitution of South Africa, that are also listed in the Curriculum and Assessment Policy Statement for EMS also form part of the classroom discussion (James, 2001). These values, therefore, should be incorporated practically into programmes by educators, administrators, governing bodies and officials as part of the needs of learners to prepare them adequately for society (Zajda, 2023).

According to James (2001), democratic values formed part of Curriculum 2005, the National Outcomes-based approach, and the Curriculum and Assessment Policy Statement (CAPS). These values have been forged out of our different heritages and our different

positions in society (James, 2001). James (2001) states that there are ten fundamental values for South African society that must be practiced to achieve a real democracy. They are democracy, social justice and equity, equality, non-racism and non-sexism, *ubuntu* (human dignity), an open society, accountability (responsibility), rule of law, respect and reconciliation. This study focuses mainly on the values that pertain to the Grade 7 CAPS: EMS curriculum: social justice/honour, equality, honesty and respect, and accountability.

3 THEORETICAL FRAMEWORK

The theoretical framework links Karl Maton's legitimisation code theory (LCT) and Heidegger's interpretive phenomenology with each other. The purpose of using LCT is to develop a deeper understanding of the pedagogical practices of teachers with specific reference to the integration of democratic values into their lessons. To understand the teachers' lived experiences, this study applied Heidegger's (interpretive) philosophy as an analytical lens, which allows the researcher to craft an interpretive narrative of how the EMS teachers integrate democratic values into their lessons. More detail on how Heidegger's notion of *Dasein* is linked to this theory will follow after a discussion on Maton's LCT.

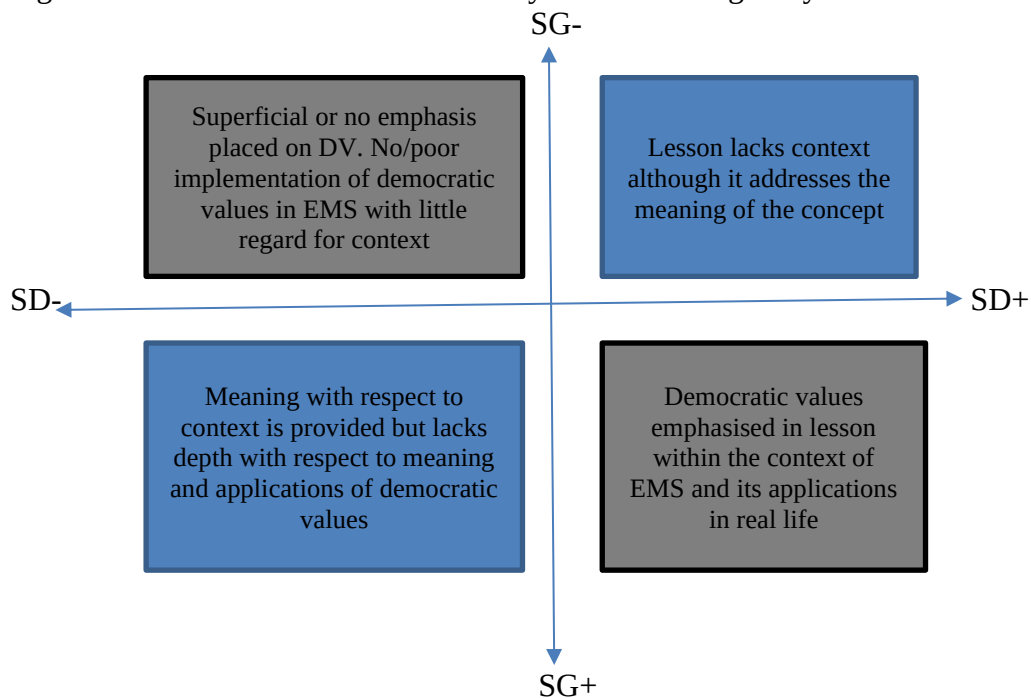
3.1 Legitimation Code Theory

According to the scholarly work of Maton (2015), LCT provides for a deeper interaction between data and theory to build knowledge in a particular field. This research methodological process of knowledge building is rooted in the dialogical relationship between data and theory to generate explanations that could go beyond the context and meaning of a study. Limits of space prevent a discussion on the foundations of the theory based on Bernstein's model of 'code theory' and Pierre Bourdieu's 'field theory'. In simple terms, LCT is an explanatory framework

that allows a researcher to develop an understanding of the underlying practices and dispositions that guide teachers. This is because all practices, especially teaching, are interpreted as ‘languages of legitimation’ in which the organizing principles are conceptualized as legitimation codes (Maton, Hood & Shay, 2015). In teaching, these codes can be classified as strong or weak dimensions that depend on how a teacher engages with his or her learners in a lesson. The data will be generated based on their experiences as EMS teachers by looking at their dispositions toward these values and the emphasis that is placed on these values when they teach. According to Maton (2015), such data can be generated qualitatively via interviews.

Semantic gravity refers to the degree to which the meaning relates to its context. The stronger the semantic gravity (SG+), the more meaning depends on the context; the weaker the semantic gravity (SG-), the less meaning depends on the context. SG can be described on a continuum of strength with infinite capacity gradation. Furthermore, Maton (2015), argues that this continuum flows from strength to weakness that can be analysed on the basis of what information the teachers convey to their learners. In the case where teachers provide a rich description of democratic values within the context of the topic and its applications in real life, it can be viewed as having a strong SG, whereas the opposite reveals a weak SG. The following diagram (Figure 1) shows the dimensions of semantics.

Figure 1: Dimensions of semantic density and semantic gravity



Semantic density on the other hand relates to the relative thickness of meaning that is conveyed within a practice. In the context of this study, SD refers to the meaning that is conveyed through the information the teacher shares in a lesson. The focus is on how the teacher relates the notion of democratic values to the lived world of the learner. If the lesson is well

articulated and well sequenced, and the learner develops a good grasp of the concept, it means the lesson has a strong

SD+, whereas the opposite means the lesson has a weak SD-. Therefore, the stronger the SD+, the more the meaning will depend on its context. Semantic density traces a scale of relative strengths,

with endless scope for progression (Maton, 2015). In EMS, SD can be seen as how well the teacher integrates democratic values with regards to its applications.

3.2 Heidegger's Interpretive Phenomenology: *Dasein*

Linking the LCT to Heidegger's (1967) notion of *Dasein* was important for this study to determine how the teachers' own upbringing as children, their educational journeys or even their experiences of living in South Africa in general has contributed to them placing a greater emphasis on the integration of these democratic values into their lessons. What was of critical importance was ascertaining the way they were raised as children and how it contributed towards helping them understand and value these democratic concepts of respect, accountability, honesty, and equality. Heidegger's philosophy helped to reconcile the way they integrate democratic values into their lessons with the way they think about these phenomena in a real-life setting. These two theories also helped to create a more meaningful narrative to understand why the teachers in this study feel the way they do about knowledge integration and why they think it is important to do so.

4 METHODOLOGY

Phenomenology describes the basic structures of human experience and understanding from a first-person perspective (Carman, 2002, p. viii).

This study adopted a Husserlian phenomenological approach to the data-construction process to synthesize a deeper meaning beyond that which is made visible through lived experience. To do so, the researchers applied Husserl's phenomenological dictum of returning to "the things themselves" (1975, p. xix). In the context of this study, this means (i) developing an understanding of how

teachers perceive democratic values and (ii) how they relate to democratic values and their integration into their EMS lessons. Within lifeworld theory, human existence is labelled and understood as personified and socially and culturally rooted as being-in-the-world.

4.1 Sampling

A total of 5 purposely selected EMS teachers from 5 different schools in the Western Cape province were selected to participate in the study. These schools ranged between high, middle and lower quintile rated schools. Quintiles 1, 2 and 3 schools have been declared as no-fee or low-fee schools, while quintiles 4 and 5 are high-fee paying schools. Table 1 below provides more details about the biographical information of each research participant.

4.2 Data Collection

Semi-structured, one-on-one, virtual interviews via MS TEAMS were augmented with fieldnotes to develop a detailed narrative of the lifeworld of each participant. The purpose of fieldnotes is to record every participant's mood, non-verbal cues or actions, and are usually made during the interview or early the next day while it is still fresh in the mind of the researcher (Seidman, 2013).

The duration of each interview depended on the flow of the conversation, for example, whether they were willing to open up and share their lived experiences and truly explore the issues in depth or not. The teachers knew how long the interview would be and what was expected from them. The first part of the interview was to get to know the research participants by gathering background information, for example, where they grew up, how their parents treated them, what their parents taught them, and what the actions and/or behaviour of the people living in their community was, etc. The second part of the

interview focused on how they integrated democratic values into their Grade 7 EMS

lessons, or whether they plan to do so or not.

Table 1: Demographic and biographical details of research participants:

	Liza	Ben	Charmaine	Megan	Hlumelo
Gender	Female	Male	Female	Female	Female
Race	White	White	White	White	Black
Age	63	37	46	48	40
Qualifications	Bachelor of Education Degree	Bachelor of Education Degree	Diploma in Education	Bachelor of Education Degree	Degree in Accounting, Diploma in Tourism and a Degree in Education
Years of Experience	44	11	23	28	4
District	Western Province District	Western Province District	Cape Winelands District	Cape Winelands District	Western Province District

4.3 Fieldnotes

Koopman and Koopman (2020) state that fieldnotes “assist the researchers in moulding and deepening their understanding of the participants’ lived world” (p. 69). These fieldnotes “relate what the researcher hears, sees, experiences and thinks during the data-construction process” (ibid.). Fieldnotes thus served as a reminder of what happened during the interview, which assisted the researcher in capturing the mood, non-verbal cues or behaviour of the research participant.

5 DATA-EXPLICATION FRAMEWORK

In phenomenology, the researcher has to develop a holistic understanding of each participant’s lived world by following an iterative step-by-step analysis without using any software application programmes. The researcher must read and re-read every transcript personally to highlight all of the important words, phrases, sentences and paragraphs. This approach is aligned with Hycner’s (1985) notion that ‘explication’ means

summarizing the exact truth as reported by the participant. By doing so, the researcher must be mindful of the context and the experience of the participant. This involves the following steps:

- Bracketing and phenomenological reduction;
- Delineating units of meaning;
- Clustering of units of meaning to form themes.
- Summarizing each interview, validating it and where necessary changing it. For example, general and unique themes were extracted from all the interviews that are amplified with fieldnotes that are integrated into the explication process.

5.1 Applying Heidegger’s Theory Of *Dasein* In Crafting The Interpretive Narrative

To truly understand a person’s actions and behaviour within the Heideggerian framework means that the researcher will need to work through all the layers of meaning in regard to the participants’ experience to develop a true

understanding of what is embedded in their consciousness. What is important for Heidegger is the impact of the world on the constitution of the self and how in turn these influences thinking and acting (Koopman & Koopman, 2020).

Context is a central aspect in Heidegger's philosophy because it opens a connection to *Dasein* as a foundation of meaning in education (Koopman & Koopman, 2020, p. 38). Heidegger's theory allows the researcher to zoom in on the actions of teachers as they think about or reflect on their roles as teachers. Information needs to be gathered on why teachers do what they do in a classroom set-up (Koopman & Koopman, 2020, p. 38) – particularly, what teachers focus on when they teach and why. Heidegger's philosophy helped us to understand how teachers' consciousness in this study relates to their interaction with and in the world. This means understanding how the teachers' disposition toward EMS as a school subject is fleshed out in their classroom practice.

6 ETHICAL CONSIDERATIONS

Before starting the data-construction process, the researchers received ethical clearance for this study from the University of the Western Cape Human and Social Sciences Research Committee (HSSREC). After that, permission to conduct research at schools under their auspices was granted by the Western Cape Education Department (WCED): Research Directorate. In addition, the principals of these schools granted permission to conduct interviews with selected EMS teachers. When approaching the research participants, the researchers ensured them of confidentiality and anonymity.

Since this is a phenomenological study in which sensitive questions were asked, the researchers took special care during each interview to 'bracket'

themselves from the participants' responses and allowed them to respond to the questions without interjecting. To ensure trustworthiness of the findings, reporting was done honestly, without editing, changing or altering the different responses of the research participants after allowing member checking of each individual transcript. This means that the reporting of the data was done truthfully in an ethical manner.

7 FINDINGS

7.1 Research Participant: Liza

Liza is a white female who grew up in White River, Mpumalanga, where she also completed her primary and high school studies. The community in which she grew up was a close-knit Christian community where everybody was involved in each other's lives. Liza grew up in a home with strict rules and values that her parents reinforced in her. She described her parents as "very hard working" and integrated this value of "hard work" into her life. Liza mentioned how her parents taught her the importance of "self-discipline" and "setting goals" in life. To Liza, accountability is a key value that she feels her learners need to know and live by.

Liza firmly believes that integrating democratic values into her EMS lessons is crucial. For instance, she emphasised that she teaches her learners that a country needs people (entrepreneurs) who are creative, visionaries, and who are responsible so that they can create new jobs. To encourage her learners to be more creative and to think out of the box, she teaches them what entrepreneurial qualities are and how they need to see a problem as a business opportunity to solve that problem. A simple example that she uses is a can opener. In the past people struggled to open the cans, now this problem is easy to solve and everyone needs and can use a can opener. The values of how she was raised come naturally when teaching the content,

in particular to respect others, to be accountable and to have discipline.

By linking Liza's integration of democratic values in EMS to Maton's (2015) LCT, her approach to integrate democratic values could be categorized as having strong semantic gravity (SG+) and strong semantic density (SD+). This is because she pays much attention to the social importance (SD+) of disciplinary knowledge by using context-dependent scenarios (SG+). These practical and context-dependent scenarios (SG+ and SD+) when teaching EMS help her to transpose democratic values that go beyond the topic stipulated in the CAPS. This and many other socio-cultural issues (SD+) and the various practical examples that are context-rich (SG+) that she uses in many of her lessons illustrate a strengthening of SG+ and SD+ by allowing her learners to see beyond the content as the learners can directly see how these values relate to a real life context.

7.2 Research Participant: Ben

Ben, a white male, was brought up in a time when there was much political instability in the country in the shift to post-apartheid South Africa. As a child, he was very liberal and free because there were very little interest in social media to influence him. The area where he grew up was predominantly white. In contrast, his father came from a very tough background, and his parents were very poor. His father was an Afrikaner, a drinker, a smoker and a car salesman, whereas his mother was temperamentally the total opposite. She is funny, friendly, English speaking and gentle. "Respect" was a very important value that was instilled in Ben's subconscious mind by his parents. From this perspective, he pointed out how his mother taught him to treat all people with respect and not to judge people because of the colour of their skin. Ben further

underscored how his father taught him to be "disciplined", a value that he holds dear.

With regard to the integration of democratic values into his lessons, Ben states that his job is much more than just conveying content. He realises that he has an opportunity to influence 30 individuals in his class at a time. Inculcating these values might not necessarily be part of his lesson plan, but he does incorporate them. He mentioned that his tasks are not themselves value-driven but rather very content-driven, and that from now on he will incorporate values into his tasks and tests as well. When teaching about socio-economic imbalances, Ben asks his learners to raise their hands if they have more than one bathroom in their house. Then he asks whether they have 2 or 3 bathrooms at home; most learners have 2 to 4. He then connects the questions with squatter camps, where families do not even have bathrooms and that the closest thing they have is concrete slabs on the ground with a hole in the middle that is shared between 500 people on average. He conveys this information to the learners to teach them about gratitude and make them aware of how privileged they are. When teaching the learners about a statement of nett worth, he gets them to draw up their own statement of their nett worth. During the next lesson, he makes the learners realise that their individual nett worth is much more than the nett worth of many entire households. He creates an opportunity where learners realise how blessed and fortunate they are and that they should be grateful. Ben tries to make his learners see the bigger picture, meaning he wants them to understand what is happening in society and not to judge too quickly, since learners are influenced by their parents. Many of the parents of Ben's learners model the same views as his father. Even today, in the new democratic South Africa, there are still white parents who are very racist. It is evident that Ben is trying to teach his learners that "equality" matters.

By linking Ben's integration of democratic values into his EMS lessons to Maton's (2015) LCT, his lessons could be categorised as having strong semantic gravity (SG+) as well as strong semantic density (SG+). The reason is that he pays much attention to context-dependent scenarios and lessons that are learned from real-life experiences. These practical context-dependent approaches to teaching EMS help him connect with the learners and teach democratic values in a way that goes beyond the CAPS. This and many other examples that are context-rich (SG+), which he uses in many other lessons, illustrate a strengthening of semantic gravity and semantic density by allowing his learners to see implications beyond the content. Overall, Ben's lesson leans more toward SD+, given his emphasis on the socio-economic challenges that many families face with the aim of creating deeper understanding. Although inequality is situated within a very complex semantic structure with a range of different reasons and meaning, Ben tries to make his lessons more practical for children to understand how lucky they are with respect to their living conditions.

7.3 Research Participant: Charmaine

Charmaine, a white female, was born and raised in a house full of teachers and therefore school and teaching have always been part of her life. She describes her parents as being very conservative. Values that were very important to her parents were "honesty, loyalty, to be hardworking" and to "always give people another chance". She grew up in the 1980s, when *racial conflict* flared up in ways never seen before. She pointed out that she wasn't much affected by the racial tension during that time and focussed on how she was taught from a very young age to "respect" everybody. She feels that people should not be judged in general. She mentioned that she spends a lot of time preparing for her lessons before teaching the content. By

doing so, she expressed the value of "hard work" and "accountability".

Concerning the integration of democratic values into her lessons, Charmaine teaches her learners to have a vision and to think out of the box. Thinking out of the box means teaching learners how to think in broader terms and to explore ideas that are creative, that are not limited or controlled by rules or tradition. When working with budgets, she teaches the learners that they are able to work with their own money and that they can also work hard and be self-employed. Charmaine teaches her EMS learners to be "independent", "hard working", "self-motivated" and "loyal". If learners have internalised those values, they have a better chance of being successful entrepreneurs. She encourages her EMS learners to associate with people who share the same values. Teaching values is essential for Charmaine.

English is not the first language of Charmaine's EMS learners; therefore, she needs to make all her lessons practical, and her approach can be seen as rich in semantic gravity (SG +) because she combines content with practical illustrations to help the learners. Without these practical examples, the learners would not understand the content at all. Often the language barrier forces her to pay more attention to the content than to integrating values into the various topics, especially when she has to teach Entrepreneurs Day – where the learners sell different products to their peers and parents. Entrepreneurs Day can also be viewed in simple terms as a market day. By preparing her learners for Entrepreneurs Day can be considered as having weak semantic density (SD-), indicating that meaning is condensed, and her learners might not be able to unpack the technical concepts of many of the topics in the EMS curriculum and how they relate to real-life scenarios in simple terms. Charmaine's narrative reflects that she

strives to adhere to the aims of the CAPS by integrating democratic values into her EMS lessons, and in the various examples she described she has attempted to integrate the democratic values of independence and mutual respect.

7.4 Research Participant: Megan

Megan, a white female, grew up in a small mining town in Gauteng. Her mother was a housewife and her stepfather worked at Sappi. She stated that she had a very happy childhood growing up. Her parents taught her to be a “hard worker”, to always “respect” others and to have “empathy”. She grew up during the apartheid era with racist parents; hence, during that time she thought racism was “right”. Her father was the authority figure in the house, and the children were “heard and not seen”. She mentioned that she always has “respect” for other people’s time, for other people, for their beliefs and for them to also voice their opinions.

With regard to the integration of democratic values into her lessons, Megan stated that she uses a scenario in which she encourages her learners to ask questions about the scenario. Afterwards, she would have a general conversation about the scenario. In this way, the learners would not only hear the opinions of their peers, but also her (Megan’s) opinion and in this way absorb the value learned from this scenario. She then gives her learners a few questions that are related to the topic, which her learners should investigate. The investigation develops into a class discussion about their findings to answer the questions. She seemed very excited when talking about this lesson and stated that even if they gave her the wrong answers at first, she would help them explore the right answers. Megan implements democratic values, but not in the sense that she tells them what value they are going to focus on in that lesson. She teaches values by creating different

scenarios in class where learners are given the opportunity to express their opinions and speak up for what they believe in. Another practical example where she implements democratic values is when teaching about Entrepreneurs Day. During the COVID-19 pandemic hard lockdown, she arranged an online Entrepreneurs Day. While teaching the learners about being an entrepreneur, she shared the story of one of her friends who lost his job because of the pandemic and how he started to sell wood. This real-life story illustrated the values of “tenacity” and “courage” and that “hard work is always rewarded”.

By linking Megan’s integration of democratic values in EMS to Maton’s (2015) LCT, her approach could be categorized as having a very strong semantic gravity (SG+) and strong semantic density (SD+). This is because she pays much attention to making the content “come to life” in her classroom by using context-dependent scenarios (SG+). These practical context-dependent approaches (SG+ and SD+) to teaching EMS help her to relate the notion of democratic values to the lived world of the learner. This and many other practical examples that are context-rich (SG+) that she uses in her other lessons illustrate a strengthening of semantic gravity and semantic density by allowing her learners to see the implications of democratic values beyond the content.

7.5 Research Participant: Hlumelo

Hlumelo who self-identifies as a black female, grew up with four siblings. She stated that she was raised to “respect” people, to respect other cultures and other people’s opinions. *“Just because you don’t believe in something, that doesn’t mean you should look down on that and not respect that”*. The values that her parents modelled were always to be “kind” and to “respect” others. Her parents did not discuss racism with her. She shares the same values as her parents; she is a very kind person and

respects people, irrespective of who they are.

With regard to the integration of democratic values into her lessons, Hlumelo implements democratic values when teaching about socio-economic imbalances. She talks about apartheid, why people did not have safe homes and why people had such limited resources. When teaching, Hlumelo believes that learners should know what is going on in our country and that they need to engage. She makes it clear in her lessons that we live in a country where there are three levels of class, which she alludes to as "high, middle and lower class". She uses this lesson on class to teach learners that they need to stay in school and study hard so that they will get a good job, and with regards to democratic values, this teaches the learners about being accountable while also working hard and having determination. She continued to say that on Entrepreneurs Day she emphasises to her learners to be responsible and honest as they are working with money. She actually teaches them about responsibility when planning their business venture for Entrepreneurs Day. She makes them understand that they are responsible for making or losing money. Since some learners do not have parents who can provide their children with products to sell on Entrepreneurs Day, Hlumelo asks the others to work together and help those who do not have products. In this way, Hlumelo believes that her learners learn the value of sharing, showing kindness, as well as the value of equality. In addition, Entrepreneurs Day also teaches learners the value of honesty, in other words, by reporting truthfully on profits made or losses suffered.

By linking Hlumelo's integration of democratic values in EMS to Maton's (2015) LCT, her lessons could be categorized as having strong semantic gravity (SG+) and strong semantic density (SD+). This is because she also pays much

attention to the social importance (SD+) of disciplinary knowledge by using context-dependent scenarios (SG+). These practical context-dependent (SG+ & SD+) approaches to teaching EMS help her transpose democratic values that go beyond the curriculum. Values-driven education is very important to her, and she integrates these values in her daily teaching, which gives her methods of teaching a positive semantic gravity and semantic density.

8 DISCUSSION

A total of 4/5 of the participants focussed on respect for others, 3/5 emphasised the importance of hard work while 3/5 highlighted the value and significance of responsibility/accountability amongst others values which they integrated into their practices. These values are important for human existence/co-existence with regards to our relationships with others and the world in which we live. For example, when we practice the value of "respect" towards others, it shows that we "respect" ourselves. When we "work hard" and act "responsibly", it shows we care about our futures and those of others. Welz (2010, p. 17) writes: "The self as relational is open to that to which it relates. ... this is how we are ourselves, we are in relation to others". This means the relational value of respect, hard work, and taking or accepting accountability for their (teachers in this study) actions, has inhibited their being and therefore their sub-conscious mind. Heidegger (1967) refers to this as *Dasein's* disposition and directed towards the(ir) world. Grumet (2005) describes *Dasein* as an act of care or a caring towards the world and others.

The reason the teachers place such significance on these values is that they were instilled in their subconscious minds by their parents. As such, the findings reveal how their lifeworlds provide the grounds for how they think and dwell in the

world of teaching. This provides a meaningful understanding of their “being” (as EMS teachers) with all encounters with people, their learners and objects (in this case teaching) within the world. Thus, their understanding and application of democratic values in their lessons should not be seen as their responsiveness to the curriculum, but how their lifeworlds are reflected in their practices as EMS teachers. From this perspective the findings reveal how their understanding of democratic values dwell in them and therefore should be seen as transcendent acts that arise out of lived experience.

9 CONCLUSION

The findings clearly show that when EMS teachers integrate democratic values into their lessons, the lessons not only become rich in semantic gravity but also rich in semantic density. Consequently, their lessons also make a theoretical subject such as EMS, with its focus on key abstract concepts, practical and context-based that are socio-culturally responsive to their learners. By so doing the learners can see how the content can be applied in the real world. For example, a question that teachers often ask themselves is: How can I make the content more practical so that my learners can see how it relates to real-life issues? By using semantic codes, this study has highlighted how values such as accountability, responsibility, honesty, equality, and kindness can be condensed into simpler forms of knowledge for a Grade 7 learner. In other words, the use of semantic codes, such as practical context-related and socio-cultural practices, can lead to knowledge construction or knowledge building in EMS.

From a phenomenological perspective, the findings provided insight into the teachers’ mental dispositions toward democratic values. Particularly, how they gave expression to democratic values in their lessons and how these values

were instilled in their consciousness as children. Using the Heideggerian interpretive lens, this means their sub-conscious awareness around democratic values has its roots in the way they were raised as children and the ontological significance they placed on democratic values.

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Critical Reflections On Researching Lived and Learning Experiences: Towards A Critical Phenomenology

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ABSTRACT

The article presents an analysis of the three authors' critical reflections on their use of traditional canonical research approaches to explore students' lived and learning experiences in the South African higher education context. Author A drew on *lifehistory research* (LHR) to understand how prospective teachers were tackling the increasing diversity in post-apartheid schooling in the 1990s when South Africa achieved its democracy. Author B engaged *phenomenography* to explore the qualitatively different experiences of medical students who were the first cohort to undertake a problem-based learning (PBL) medical curriculum across diverse clinical contexts within a failing healthcare system (in 2010). Author C initially framed his study that focuses on student teachers' lived experiences in diverse teaching practicum (TP) contexts in phenomenology and uses this reflection to argue for a move to critical phenomenology to embrace a more social and political analysis of the participants' lived experiences (2022). Anchored in the critical paradigm, the authors question the relevance of traditional lifehistory research, phenomenography and phenomenology to study lived experiences, especially in contexts where elements of marginalities, complicit oppressions, power negotiations and peripheralisations are at play. The findings reveal that each of the approaches could not be disconnected from a historical socio-political analysis of why inequities persist despite the expressed formal transformational intentions. Lived experiences and the historicised and politicised systemic contexts are intertwined. The article concludes by exploring more relevant and appropriate theoretical frameworks blending interpretivist and critical worldviews. This permeability (whilst resisted by hegemonic guardians of the canon) expands phenomenology traditions to activate prospective research studies in a continuing unequal society.

Keywords: Lifehistory research, phenomenography, critical phenomenology, phenomenological turn

INTRODUCTION: Multiple research traditions of researching lived experience

The interest in celebrating participants' life experiences is not unexpected, especially in contexts where systemic silencing of individuals dominates. Studies of individual experience are often associated with matters of marginality of race, gender, sexual orientation, class and other oppressed categories of individuals at the mercy of oppressive hegemonic forces

(Guenther, 2019). This article traces the reflections of three South African researchers who grappled with researching the lived experiences of university students at different points in the evolving post-apartheid context. Each of these perspectives reflects the specific eras when their original research project was conducted: in the early 1990s when redefinitions of a new democratic education system were being forged, in the late 2000s when alternative curriculum approaches in

higher education were being experimented with, and in the early 2020s as continued inequities still confront higher education and professional teacher education. The article highlights the authors' self-reflective re-examination of the dominant research traditions they originally embarked upon. The authors motivate the need to rethink the founding tenets of the research approaches on which they designed their studies. The article shows how researching experience can shift beyond the parochial, nostalgic and circumscribed world of neo-liberalist romanticisation and reductionist accounting of individualistic experiences. The emergence of the hegemonic forces of systemic power influencing students' experiences characterises the authors' preoccupation.

Three traditional research approaches will be explored: *lifehistory research (LHR)*, *phenomenography* and *phenomenology*. Each co-author will outline their lived experiences as researchers represented in first-person reflection. The research process is presented as a dialogue between the researcher/s and the researched, their contexts and their lived worlds (Schulze, 2012; Thambinathan & Kinsella, 2021). Drawing from their founding interpretivist roots, these three research approaches challenge the traditional empirical perspective, which advocates an objectivist distancing between the researched and the researcher (Holmes, 2020). However, by further elaboration, this article makes a case for a blurring between traditional interpretivist worldviews with a more critical paradigmatic orientation that attends to matters of hierarchy, inequity and power differentials.

RESEARCH OBJECTIVES: Troubling the canons.

The article questions how helpful the traditional canonical underpinnings of LHR,

phenomenography and phenomenology are in exploring the lived and learning experiences of students who are located in unjust, inequitable and diverse learning environments. This agenda acknowledges that the traditional approaches had foundational impetus to foreground the nature of the students' lived and their learning experiences. However, the conventional research approaches lacked explanatory power to offer theoretical insight into why these lived and learning experiences occurred the way they did.

The reflective approach described in the findings section below begins with a description of each of the three researchers' foci as they began their research studies. It then proceeds to identify the analysis of the data, which provoked a broader socio-political commentary on the nature of the experiences within the context of an evolving democracy. The authors were concerned that there was a need to attend to matters of social justice, marginality and equity debates to explain the insights into the university students' experiences. Two types of professional education students are described in this data set: student teachers during initial teacher education (Authors A and C) and medical students during professional medical education (Author B). These reflections conclude with an exploration of whether there is a need to shift the traditional canonical underpinnings of the three research traditions to enable the exploration of participants' lived and learning experiences in a continuing unequal society. The sub-sections below is an attempt to represent the researcher interacting not only with the field participants but also with the (evolving) epistemological, ontological and analytical positioning they adopt. The article concludes by looking at cross-fertilising the three co-authors' reflections. This

exploration suggests a way forward towards a prospective *critical phenomenological approach* relevant to tackling power, marginality and disruption.

LITERATURE REVIEW AND THEORETICAL FRAMEWORK:

Diverse and convergent lenses

This article draws on the literature from the specific fields of LHR, phenomenography and phenomenology as independent bodies of knowledge. We represent their theoretical framings of this diverse literature in the sub-sections as discreet bodies of insight, revealing the baseline theoretical positionings of the research approaches of the three researchers. The chosen literature for each of the sub-sections is contingent on the time at which the studies were conducted (see introduction above). The methodological field, however, is not static, and our reflection shows how these seminal foundations came to be destabilised as we rethought their value for our localised contexts. This stance invites future scholars not simply to be subservient to the worldview of canonical research traditions but to re-interpret and re-make theoretical worthwhileness based on re-defined researcher purposes.

Each of the fields of research inquiry reflected on has a unique historical trajectory in their emergence into the field of qualitative research approaches. Lifehistory has its origins in an exploration of identity studies (Clandinin & Connelly, 1994). The celebration of life experiences is understood as an emancipatory goal for participants. Phenomenography foregrounded the ways individuals make sense of the world in variant ways with others who share their contextual spaces (Marton, 1986). The goals are to make explicit the process of constructing the quality of the individuals' experience. Phenomenological research proposed a descriptive subjective analysis of

consciousness (Husserl, 1983) which later included interpreting individual experiences through their being and becoming through embodied experiences (Cerbone, 2014). (A critique of these theoretical foundations is presented within each author's reflection below.)

Whilst at a superficial level, the adopted theoretical approaches may appear diverse, they nevertheless share a paradigmatic 'connectedness' in interpreting the complexity of individual subjective experience. Researchers are invited into that 'internal space' of participants reading the world, and the different traditions represent this unfolding, complex, messy yet kaleidoscopic process (Thambinathan & Kinsella, 2021). Additionally, that inner world is populated with the exigencies of the everyday sociological synapses. This article focuses on the intersection between the personal levels of reading the world and the 'outer contexts'.

A further theoretical synergy across all three approaches concerns how power differentials infuse the research spaces we explored. It is not surprising, given the inequities of the past apartheid education, that we interpreted our research studies not just as providing descriptive accounts of the experiences of individuals in the higher education system (Spaull, 2013). We were concerned about how student experiences were circumscribed by their context. We questioned why radical agendas of the campaign for social justice (whilst often professed in rhetorical student politics) have increasingly become co-opted into watered-down versions of themselves, sometimes even looking opposite to what was initially intended (Jansen & Walters, 2022). A critical paradigmatic theoretical interest provoked us to question how higher education has become fetishised by

individualism and performativity discourses (Chikoko, 2016). We examined how student experiences have become implicated in personalistic individual private agendas. Perhaps the individualistic personal agendas were undercutting the broader public good of higher education (MacGregor & Makoni, 2010).

It should be noted that the comparative juxtapositioning of the three researchers' methodological approaches is an *ex post facto* form of reflective inquiry. The authors themselves had not adopted a common *a priori* framing chosen before the commencement of their studies. This does not mean that this article is a-theoretical. Instead, the article positions the theoretical lens *a posteriori* (Cohen, Manion & Morrison, 2018) primarily since the studies themselves were conducted in differing periods. The research experience is lived, described and subsequently theoretically interpreted in the closing section in a form of practice-led stance that builds theoretical insight from practical research experience (Mariaye & Samuel, 2021).

RESEARCH METHODOLOGY: A comparative reflection

The unfolding data for this article draws from the reflective account of the three authors about the choices made in their research studies. The first approach by Author A explores how *lifeshistory research* (LHR) as a theoretical and methodological endeavour expanded across diverse fields of study: commencing with interpreting student teachers' learning experiences of negotiating teacher professional education studies to tackle multicultural schooling in spite of their prior mono-racialised schooling. The LHR tradition, using models developed to understand the constructing of a post-apartheid identity, expanded into health sciences professional education, team and institutional biographies. Personal

and systemic interpretations of experience are explored.

The second *phenomenographical approach* explores the ontological relationship between the participant and the phenomenon in medical education. Author B explores how this lens presented the students' personal ways of experiencing a novel pedagogical phenomenon, namely, problem-based learning (PBL) models in their teaching and learning process of medical higher education. Since the phenomenographic approach yielded inadequate, circumscribed, and reported student variations only on descriptive levels, the author reflects on the option to embrace critical analytical stances as to why the variations were noted. The sociological and politics of knowledge production are highlighted here.

The third approach reflects on the design stages of a present research study grappling with the limits of a traditional *phenomenological approach*. Author C explores how student teachers' lived experiences vary across different contextual spaces during their teaching practicum field experiences. Moreover, the contextual biographical heritages drawn from diverse schooling contexts as learners, challenge these participants to question their crossing-over into alternative schooling spaces. In attempting to understand students moving out-of-their-comfort zones, the data needed a more exhaustive socio-political analysis. This prompted the author to explore the emerging literature on *critical phenomenology* as a potentially disruptive insight into his research study.

DATA FINDINGS: Learning from reflection.

This section outlines the reflections of the three authors on their original research approaches.

1 Life history research: Researching student 'teachers' storied lives (Author A)

What is lifehistory research?

It is often erroneously assumed that lifehistory research (LHR) recounts a celebratory story of individual lives. This has been spurred on by the numerous attempts at vanity biographies that have been constructed (usually by ghostwriters) that tell the intricacies of the stresses and successes of celebrities. It has sensational appeal to those wanting to peep into the lives of people who are notorious, rich or famous. However, as a well-established research approach, lifehistory research attempts to develop a theoretical exploration of a phenomenon, drawing on the life experiences of individuals who provide the material for abstracting thematic analysis of the phenomenon being studied. The interaction with the research participants is not to delve into the intricacies of their storied lives per se. LHR abstracts from the storied lifehistory the epistemological insights into the phenomenon being researched. For example, the storied life history foregrounds individual participants' interaction in a particular place, space, and timespan. This may or may not include significant others to construct the storied life.

Additionally, LHR is not a forensic test of whether the individual has reported a factual truth (a scientific truth) about their lives and the phenomenon (Clandinin & Connelly, 1994). LHR is interested in how individuals choose to tell the story of their lives and the details of the phenomenon being explored. It is thus interested in how individuals experience particular moments and episodes in their lives to feed the *epistemological exploration of the phenomenon*. Convergences and divergences amongst the selected

participants assist in deepening the insight into the phenomenon (Dhunpath & Samuel, 2009). This retelling of experiences is reliant on memory recall which is infused not by the events of the past but also by how the individuals in their present circumstances choose to remember the past (an experienced truth). Individuals live in an infinite present which intertwines the past, the present and the future interpretations of the hopes and fears of the participants (Manathunga, et al., 2022).

Developing a theoretical model from lifehistory research

In my own (Author A) research approach, which began in the late 1990s, I chose to foreground the life experiences of student teachers over different periods of their lives (Samuel, 2008). My emphasis was on *how they experienced the learning/teaching of English as a language within their homes, communities, primary and secondary schools, and then within tertiary education as student teachers*. The study extended into analysing experiences of students' undergraduate teacher education experiences and entry into the practicum contexts of deracialising schooling contexts in post-apartheid South Africa. My research findings provoked the construction of a theoretical model depicting the multiple forces influencing teacher identities and their pedagogical decision-making. This model opened up the argument that forces of *biographical* heritage (in specific racial, gendered, classed and geographed areas) drew unique powerful inertial experiences toward which students repeatedly reverted as prospective novice teachers. However, the forces of the *curriculum* programmes they experienced at higher education institutions triggered them into alternative possibilities for being and becoming a teacher. The forces of the school *institutions* into which they were

placed as novice teachers also had a bearing on their evolving interpretations of their experiences.

Similarly, the broad *macro-contextual environmental* shifts occurring within the South African changing political landscape at the time of the turn away from apartheid schooling also infused them with possibilities for alterity. All these forces (*biographical, programmatic, institutional and macro-contextual*) were considered as continuously in dialogue with each other, pushing and pulling student teachers' identities in multiple directions. The study revealed that student identities and learning experiences were thus recurrently being shaped and were shaping ambient forces. This reflected the complexity of identity formation and their experienced worldviews.

New directions for researching experiences using LHR.

Similar studies have since been undertaken (Dhunpath & Samuel, 2009) using the Forcefield Model of Teacher Development to explore the construction of professional education in a range of contexts, for example, in health professional education foregrounding experiences of professionals-in-training or as practising professional therapists dealing with uncertainties in practice (Pillay, 2009; Naidoo, 2019). The approach of theorising experiences includes the study of the evolution of participants' experiences in non-governmental institutions and their mutations in post-apartheid South Africa (Dhunpath, 2009). This collective focus was extended to the study of institutional historical biographies or teacher union structures (Samuel & Mariaye, 2016; Mannah, 2009). Specific, focused biographical cohorts are depicted in more recent studies: for example, the study of music lifehistories of prospective student

teachers in primary schooling (Ralfe, forthcoming). Newer studies have included the exploration of the stakeholders shaping information communication technology policies in education in small island developing states (Ramtohul, forthcoming).

The expanding emphasis of the scope of LHR as a research approach emphasises avoiding reductionist ways of seeing and reading the world. Whilst the original interest of LHR tended to look at individual lives and experiences as the unit of analysis, recent foci have expanded to explore systems, institutions and collective groups of individuals reflecting not unique but intersected forging together of communal, experiential ways of knowing. The emphases have been on exploring the intersecting of competing worldviews and experiences, which always embed elements of power differentials (more of this later). The lifehistory evolution has reflected the adage that the personal is political, connected and interconnected in entangled ways with pluri-versal persons, collectives, times, and places.

2 Phenomenography: Researching medical students' learning experiences (Author B)

A critical reflection on my PhD study

This critical reflection deals with my use of phenomenography to research the learning experiences of the first cohort of medical students who undertook the PBL medical curriculum at a medical school in KwaZulu-Natal (Reddy, 2010). Marton (1986, p. 31), one of the founding fathers, laid the foundation for the epistemological and ontological basis of phenomenography, describing it as:

"A research method adapted for mapping the qualitatively different ways in which people experience, conceptualise, perceive, and

understand various aspects of the world around them... [P]henomenography investigates the qualitatively different ways in which people experience or think about various phenomena."

Phenomenography is not only concerned with the phenomenon being explored. Neither is it concerned with just the people who are experiencing the phenomenon, but it considers the relation between the two and how people experience or think about phenomena (Reddy, 2010)¹. In my PhD study (Author B), phenomenography provided a relational method of discovering how the medical students experienced learning the clinical aspects of a PBL medical curriculum and how they subsequently implemented their clinical expertise in the various medical settings within the South African health care system. Phenomenography was used as a methodology to describe and interpret the 'qualitatively different ways' participants experienced the phenomenon. The aim of the PhD study was not simply to capture the full richness of the 'participants' experiences, but it aimed at a specific level of description foregrounding participants' capabilities for experiencing the phenomenon (ways of learning the clinical aspects of a PBL medical curriculum) in qualitatively different ways.

The object of phenomenographic research is variation in ways of experiencing a phenomenon. Pang (2003, p. 146) claims that, "there are two faces of variation". The first face refers to the study of variation between different ways of experiencing the same phenomena, in which categories of description and outcome space are derived to describe how people

experience the reality. The variation that corresponds to the critical aspects of the phenomenon, i.e. the dimensions of variation as experienced by the experiencers, is the second face of variation (Pang, 2003).

The first critical question in the PhD study was concerned with the 'first face of variation': *What were the first cohorts' experiences of learning the clinical aspects of a problem-based learning (PBL) medical curriculum?* The study was conducted when the higher education institution explored alternative professional education methodological approaches. PBL represented a challenge to the traditional Applied Science notions of medical education, where students were exposed first to learning theoretically about the physiological body and then using this knowledge in practical contexts. PBL commences with situated, contextual spaces with defined problem manifestations, and students (as collaborating researchers) activate the search for the requirements for holistic responsiveness when selecting appropriate medical interventions.

The study here was basically descriptive, methodologically oriented, and concerned with the qualitatively different ways participants experienced the phenomenon under investigation. As the researcher, I could sense and understand the variation indicated by the data in this instance. In terms of the 'second face of variation', the emphasis of phenomenography here shifts from methodological to theoretical concerns. The research addressed the 'nature of the different ways of experiencing' based on the following: *How was the relationship between the experiences of learning the*

¹ Traditional phenomenology is concerned primarily with the nature of the phenomenon

itself, and the person who experiences that phenomenon (Larsson & Holmström, 2007).

clinical aspects of a PBL medical curriculum and the experiences of the subsequent clinical environments constructed? From the above, it is evident that phenomenography may be used as a methodological approach as well as a theoretical framework. Theoretically, it may be used to explore and describe the individuals' cognitive relationship with the world that they live in (Marton & Booth, 1997). It also concerns itself with the variation of how people experience something.

A critique of phenomenography

My PhD study focused on the range of clinical experiences from the PBL medical curriculum to the actual clinical setting of the South African health system hospitals. The participants were asked to reflect on all the different contexts within which the learning took place. This included their experiences in the Skills laboratory (years 1, 2 and 3), the hospital wards (years 3, 4 and 5), internship (years 6 and 7) and finally community service (year 8). In this way, I expected the participants to express the different ways of experiencing the phenomenon across all the variant clinical contexts. I intended to yield data that reflected and described a variation of the 'ways of experiencing'. In my data collection efforts, I was guided by Marton (1986; 1994) who advised about an open-ended technique with a limited number of questions to evoke the participants' own conceptions. The utterances (as per the interview) were considered as indicative of 'ways of experiencing'. On completion of the phenomenographic analysis, I began questioning the emergent phenomenographic categories that were limited to a superficial descriptive level. I then started a search for an additional analytical approach that would enable me to unpack and illuminate the phenomenographic categories of description

beyond the interpretive phenomenographic level of understanding.

When Ference Marton founded phenomenography in the early 1970s, it did not have a particular overt philosophical basis; neither was it guided by specific theoretical underpinnings (Entwistle, 1997; Giorgi, 1999; Akerlind, 2008). Phenomenography emerged from a strong empirical basis mainly concerned with solving specific learning and teaching problems in higher education (Entwistle, 1997). It later developed from "problem to solution and from question to answer" (Giorgi, 1999, p. 114). Entwistle (1997) succinctly summarises the purpose of the original phenomenographic research:

"What eventually became codified as phenomenographic research started out as an attempt to scrutinise and understand human learning by focusing on what people are in fact doing in situated practices and when studying. In particular, the approach was driven by an attempt to replace the abstract and empirically unverifiable conceptual frameworks, such as those which implied that people 'process' or 'store' information in various processing devices of dubious ontological status... The aim was one of reinstating a truly empirical approach to learning as a human and institutional phenomenon, with an interest in clarifying functional relationships between what people do when they engage in learning activities and the nature of understanding they end up with..." (Entwistle, 1997, p.128)

Phenomenography subsequently became a popular qualitative research tool,

used by researchers who were interested in studying teaching and learning in higher education. With its popularity, came problems and challenges (Entwistle, 1997; Webb, 1997; Ashworth & Lucas, 2000; Levy & Ben-Ari, 2009). Some phenomenographic studies were critiqued in the early years for not being rigorous enough in their research design and analysis. Both qualitative and quantitative researchers have challenged the phenomenographic approach concerning the subjective nature of deriving the categories of description. This critique, however, may well be pertinent to much qualitative research and is not only peculiar to phenomenography.

Initially, the focus of my study was to understand and describe the qualitatively different ways of experiencing the phenomenon. The phenomenographic approach enabled me to arrive at such categories of description. However, phenomenography alone did not allow me to answer the 'why' research questions of the study. In attempting to uncover *why the participants in my study constructed the relationship between learning the clinical aspects of a PBL medical curriculum and the subsequent clinical environment in the ways that they did*, I needed to unpack the causes of attitudes and behaviours that the emergent categories described. A methodology that would allow me to explain, expose and illuminate each behaviour was required. According to Webb (1997) phenomenography does not have a particular view of humanity since it is entirely interpretive and descriptive. It, therefore, makes no critical claims. Webb (1997) argues that phenomenography does not take the social context of education into consideration. He justifies this argument by stating that phenomenography is:

"Not in any sense politically radical and no responsibility is placed upon lecturers to produce social reformers, to motivate transformative intellectuals, to argue the oppressive nature of education within an unequal society or to call for deschooling." (Webb, 1997, p. 198)

Phenomenography in the above regard claims to be neutral in terms of its relationship with the learners (participants). It assumes an interpretive position regarding values and interests by acknowledging their existence without critiquing their power. In my study, some of the phenomenographic categories that emerged from the data reflected power issues. Many researchers feel that it would be a hindrance to their practice if value positions and ideologies are factored into their research (Webb, 1997). The author goes on to critique phenomenography for the supposed observational and interpretive neutrality of the researcher, that is usually characteristic of positivistic researchers. He further claims that the qualitative nature of phenomenography is underdeveloped in terms of its inability to exhibit hermeneutical values that are typically associated with human beings. Webb (1997) challenges the qualitative positioning of phenomenography by stating that a tension exists between Entwistle's argument that qualitative analysis requires 'rigour' and carries the 'hallmarks' of scientific research and, at the same time, seeks 'empathetic understanding'.

Webb's critique questions the location of phenomenography within an interpretive paradigm and raises a suspicion that phenomenography's methods appear to seek a quest for positivist truths which allow for broad generalisations rather than a hermeneutical understanding of the

participants' ways of experiencing the phenomenon. In my attempt at data collection and analysis, I remained faithful to the phenomenographic approach by adhering to the stipulated hermeneutic processes that enabled me to arrive at the categories of description. However, at that point, the research shifted to a more critical approach as I adopted a critical lens to further explore and illuminate the categories of description. The paradigmatic shift also allowed me to account for why such categories emerged.

I became increasingly uncomfortable with the interpretive relationship I had with the data in wanting to account for and describe the participants' experiences. The phenomenographic analysis only allowed for a description of the participants' experiences and did not account for how the categories had power over their realities. As a researcher, I was no longer satisfied with just tracing the participants' experiences and describing them. My relationship with the research phenomenon underwent a significant shift due to my response to the emergent categories. I increasingly felt the need to analyse the participants' experiences regarding the issues of power and control, discrimination and marginalisation that emerged. As a result of this epistemological disposition, I was prompted to engage with a *critical discourse analysis* (CDA) to more fully account for the phenomenographic findings in the data. The shift from a descriptive, interpretive paradigm to this 'emancipatory paradigm' allowed me to explore why the participants in the study constructed their relationship with the phenomenon in the way they did. Luckett (1995) claims that it is within this paradigm that the teaching and learning experiences should be subjected to an 'ideology critique' so that the 'political and socio-economic' causes of what might be considered 'natural' could be exposed. The critical paradigm asks

questions such as "whose interests are served by the curriculum? What curriculum would promote greater equity, emancipation, and social justice? How is power distributed in the teaching and learning process? And how can it be more equitably distributed?" (Grundy, 1987, p. 12). Thus, while CDA was used to augment the phenomenographic analysis, due to the nature of the categories which emerged from the data, it cannot be denied that it entailed an ontological shift within me as a researcher (Reddy, 2010).

My foray into phenomenography has clarified the appropriateness of conducting research within particular socio-political environments wherein not just the voices of participants and their experiences are adequate for analysis. Such systems inherently embedded issues of inequity and injustice, and my research approach attempted to contribute to understanding how these hegemonic forces are at play. The very social system itself came to be embedded in making sense of the field participants' experiences and my analysis.

3 An extended phenomenological approach: Researching student teachers' lived experiences of diversity (Author C)

Beyond adherence to founding canonical phenomenology

Like the co-authors above, who are now seasoned researchers, I (Author C), as a novice researcher, came to question the theoretical framework I chose during the early stages of developing a doctoral research project. My study focussed on *student teachers' experiences as they negotiated their trajectory through initial teacher education*. I was interested in why students resisted moving out of their comfort zones (Boler & Zembylas, 2003). I drew on the canonical works of phenomenology as a philosophical positioning originating in the 20th century

with the corpus of Edmund Husserl and repeated in authors such as Martin Heidegger, Jean-Paul Sartre and Maurice Merleau-Ponty. I humbly sat at their feet especially inspired by those scholars who regard Edmund Husserl as the father (Koopman & Koopman, 2020; Koopman, 2017; Weimin, 2008; Groenewald, 2004; Devenish, 2002). The classical phenomenological approach was initially considered an appropriate choice for my study. However, I soon realised that this approach would only gather me vague descriptive-level insight into the studied phenomenon. Husserl posited a descriptive analysis of consciousness, proposed as the transcendental foundation for all other sciences (Husserl, 1983). In later years, phenomenological philosophers expanded on this approach to include more hermeneutical and existential issues, emphasising themes such as embodiment, being in the world, and action (Cerbone, 2014). The main argument made by Husserl is that a lived reality in the world exists (pure consciousness), and the person experiencing the event is living their actual truth. I embraced the potential to read the world of my student-teachers' experiences and designed research instruments appropriately to yield such insights about teacher professional development (Gallagher, 2020, p. 1). Using a traditional phenomenological lens, I probed the conscious truths of my participants' professional development.

I respect that phenomenology is concerned with an individual's lived experience of the everyday world. Although scholars have differing opinions, the common features of phenomenology are agreed upon and described as:

1. "A belief in the importance, and a sense of the primacy, of subjective consciousness

2. An understanding of consciousness as active, as meaning bestowing, and

3. A claim that there are specific essential structures to the consciousness of which we gain direct knowledge" (Curtis and Mays, 1978 cited in Cohen, Manion & Morrison, 2000, p. 23).

However, I considered classical phenomenology somewhat limiting in the South African context. I saw broader value in providing insightful interpretations of the lived experiences of my students, whom I deemed to be subjugated by the authoritarianist curriculum dictates of official teacher education. My student reflections during interviews revealed that the institutionalised curriculum primarily regulated students to be mere recipients of the lecturers' wisdom and their worldview. This was despite the professed claims that the curriculum intended to liberate students' potential as prospective professionals. I wanted to know more about who these students were and *what made them resist the opportunities to embrace other ways of being and becoming beyond what apartheid schooling and higher education had offered them*. Canonical phenomenology allowed me to listen attentively to my participants' interpreted worldviews and lived experiences, yet it seemed to exclude broader framing sociological context from which the participants arose. *What explained why the student experienced their teacher education the way they did?* Traditional phenomenology seemed to advise me that this explanatory level was unnecessary since the prime focus was on the experience itself.

The social, economic, and political dimensions of experience

However, as I progressed with fieldwork, it became apparent that these students' curriculum and institutional experiences are not independent of a circumscribed sociological, economic, and political context. I agreed with Koopman and Koopman (2020, p. 1), who profess the philosophical belief that:

"[Phenomenology as a] method of research in education is particularly important in South Africa because it opens the door to the consciousness and subconsciousness of research participants in order to understand how their mindsets have been affected by various forces: that is, the social, cultural, political, and economic forces of influence."

In other words, when working in phenomenology, they recommend that phenomenological researchers appreciate the fullness of the participants' selves. Koopman & Koopman's view (2020, p1) argue that "important human qualities such as kindness, care and compassion towards others, particularly in our role as educators" should be embraced when conducting phenomenological research in education. The individual (living body) is a source of knowledge in its plenitude.

I further came to read other works that challenge a purely subjectivist primacy of consciousness whilst still operating within the overall tradition of phenomenology. My exploration encountered Dyring and Grøn (2022), who argued for a *critical phenomenology* that respectfully foregrounds the lifeworlds of those existing on the margins of society: for example, "people of colour, queer people, drug users, homeless

people, and people living with dementia or other mental illnesses" (Dyring & Grøn, 2022, p.1). A critical phenomenology interprets experiences within the power dynamics of societal structures. I resonated with these sentiments because I, too, as a person of colour relegated to the fringes of normative South African apartheid (post)schooling, had experienced living on the margins of dominant hegemonies. The student-teachers also emanate from the margins in a post-democratic South African society, and their TP school choices and experiences reflect their hesitancy to embrace otherness. The psychological continuity of the past allowed me to question further why inequity endures despite laudable policies steering new possibilities for a just society. In theory, higher education institutions in South Africa ought to be spaces that bring together diverse students from these historicised, bifurcated social learning spaces (Smith, 2020).

I chose specifically to explore how these students tackled diversity experiences during their exposure to unfamiliar Teaching Practicum (TP) contexts which were part of their official teacher education curriculum requirements. The students were placed into TP schools, unlike the ones they went to as school learners. The purposively selected sample varied in race, gender, religious beliefs, ethnicity, language and age. The study's primary objective was to gain insight into the quality of their TP experiences related to power dynamics within the various TP schooling sites and how this may (or may not) influence their professional learning. A *critical phenomenological* approach emerged as a valuable lens and tool for data production and analysis.

I believe that a traditional phenomenological approach to the phenomenon would have rendered only

shallow insight into the operational understanding of the phenomenon. I wanted not just to know what the student teachers' experiences were, but what explains the character of those experiences. I expected that schooling sites would enable spaces to activate student teachers' professional development. However, preliminary data analysis revealed that most students reported hesitancy to return to their TP schooling contexts after graduation. I am still in the initial stages of data analysis, yet, I am emerging with a view that a critical phenomenological approach can potentially generate more profound insight into the aftermath of a society still plagued by various power dynamics. Within the Western Cape (Cape Town, South Africa), the acute geographical placement of marginalised people has influenced their conceptions of belonging within the post-democratic, socially just country.

I acknowledge the potential of classical phenomenology as a theoretical starting point that advocates the study of the direct experience taken at face value; and one which sees behaviour as determined by the phenomena of the experience rather than by external, objective, and physically described reality. However, critical phenomenology extends this individualistic focus to embrace critiques of societal structures (inspired by critical theory or poststructuralism) that orchestrate the potential of individuals. Critical phenomenology merges individualistic, socio-political, and cultural dimensions of experience, and highlights the means to live under conditions that still sustain injustice (Dyring, 2022). By philosophically using critical phenomenology as a theory and methodology within my PhD study, I endorse Guenther's (2019) argument that a critical turn is merely an acknowledgement of the traces of criticality that were embedded in the canonical phenomenological respect for individuals' experienced worlds. This is made more explicit

by locating the approach within the discourses of social justice and equity from more radical, emancipatory perspectives.

Reading through the canon and beyond

I became aware that the paradigmatic home of phenomenology within an interpretivist paradigm was being challenged by critical phenomenology. Alternative terms such as *emancipatory research* and *radical phenomenology* have become useful probes as I expand my foray into critical phenomenology. Thankfully, these terms opened a doorway to various philosophical research framings challenging canonical phenomenology. I list the threefold challenges critiquing canonical phenomenology as a research approach:

- Phenomenology **applauds** the first-person account of phenomena as they manifest in their experience or how they perceive and understand phenomena regardless of the **exactness** of the experience. Such 'exactness' excludes a broader sociological locatedness of the individual it seeks to understand.
- Phenomenology uses an **in-house language** which caters only for those who are privy to understanding it. The historical terms of this philosophy include 'epoché', 'dasein', and other scripted coded phrases. As a novice researcher, grappling with the complex jargon of the theoretical worldview of phenomenology proved arduous. I questioned whether this resulted from my reading of original texts translated from other languages (German or French) into English (the medium of my reading).
- Novice phenomenologists may become inundated with **excessive data production**, resulting in being

overwhelmed when undertaking the analysis within a set timeframe.

My present circumstances of embracing and expanding traditional phenomenology were akin to designing and building my house simultaneously. My supervisors advised me that such dialogicality was not problematic but theoretically resourceful.

My choices for a future perspective

Duvenage (2002) argues that South African researchers are on a quest for alternate philosophical drives to steer more relevant research. Some scholars have opted to embrace radical decolonisation (in all its contested variant forms) to examine the local higher education landscape curriculum (America, Edwards & Robinson, 2021; Jansen & Walters, 2022). This search for alternative philosophical standings requires leaving behind British Idealism and European continental thinking (Duvenage, 2002). Nevertheless, the overlooked intellectual discourse of phenomenology is starting to receive recognition as one possible alternative. Through the works of southern scholars, a re-imagined phenomenological orientation which embraces socio-historical locatendness is emerging as a starting point (see Koopman & Koopman, 2020). South Africa has a history plagued by heritages systems of inclusion and exclusion (Du Plessis & Mestry, 2019), which makes for insightful exploratory studies. The authors argue that one would have benefited or suffered from the segregation based on one's specific geographic location, racial, gendered or class orientation. My emerging purpose, linked to these experiences of prejudice, is to understand why despite a democratic constitution and new legislative policies that aim to democratise the education system at all levels: geographic,

race, class and gender disparities continue to prevail in learning/teaching spaces.

As a postgraduate researcher who has embraced (at the moment) the works of various canonical phenomenological scholars, I am patently aware of tensions experienced by student teachers who are aspiring future professionals. However, I will not only focus on the consciousness of their developmental learning experiences. I extend the current potential of phenomenology to that of *critical phenomenology*, which foregrounds experiences of marginalisation, oppression, and power to identify a transcendental experience (Weiss, Salamon & Murphy, 2019). I undertake to foreground experienced power dynamics in any form which may have arisen during the placement periods during TP. Utilising a critical phenomenological approach can influence my understanding of the research study's phenomenon, but importantly, hopefully, provide a deeper paradigmatic embracing of both an interpretivist and a critical paradigmatic worldview. This marriage could be considered heretical to those interested in the conventional surveilling of the borders between paradigms. Instead, like Lather (1997), I embrace the possibility of blurring boundaries and arguing for paradigmatic proliferation rather than singularity. My future analytical insights, drawn from a pluri-versal stance, will be made more evident after completing my doctoral study.

ANALYSIS OF FINDINGS:

Understanding our researcher disquiets

A meta-analysis of the three above reflections suggests that all three authors were originally comfortable with their traditional canonical research approaches as they commenced with their studies. These interpretivist theoretical foundations

allowed them insight into the phenomenon of subjective learning and lived experiences of students they were studying. However, as researchers involved in co-construction of their findings from the field, each of them came to interpret their emergent initial results as somewhat limiting and disconnected from their own personal experiences of negotiating working, teaching and researching in an evolving democracy. By contrast, their participants seemed to offer insights into reading of their world as complex and intersected with the socio-historical connections of time and space. Each of the authors came to experience the disquiets of a sanitised interpretation of only the internal landscape of the nature of the students' learning and lived experiences. The findings offered limited leverage to activate alternative interpretations to shift the historicised worldviews of their students. Sedimented acceptance of the status quo of the inequities of the social contexts was strongly dominant in their fieldwork analysis. Notably, the campaign for a democratic transformed society (a founding principle of post-apartheid endeavours) was imbued with the potential not to accept the locatedness in the past but tackle enabling opportunities to disrupt into new ways of being and becoming. Their expectation of research outcomes offered potential for a chosen destabilisation of the present to move their students into future possibilities.

The findings reveal firstly that the evolving *lifehistory research* (LHR) on life experiences has been spurred on to shift from its individualistic liberal discourse as a form of 'vanity research' towards a broader understanding of the lived experience that is understood not in 'internal rationalities' but as embedded within a social context. LHR came to include not only a focus on individuals but also groups and institutional systems. Secondly, an analysis of

phenomenographical research which looked at how and why the experiential processes of learning occur within a medical education curriculum space recommends that an alternative more critical and sociological analytical lens was needed to interpret the complex contexts where power and marginality dominate participants learning experiences. Thirdly, the development of a theoretical lens for a prospective study, which anticipates that researching student teachers' lived experiences whilst working across diverse teaching contexts, cannot be confined to only *canonical phenomenological lenses*. The constructs of traditional phenomenology adopted need to be elaborated to incorporate the historicised and politicised systemic dimensions of lived experiences. More relevant and appropriate theoretical frameworks blended interpretivist and critical worldviews. This permeability (whilst resisted by hegemonic guardians of the canon) expands phenomenology traditions to activate prospective research studies in a continuing unequal society.

DISCUSSION: Towards a phenomenological turn- developing critical phenomenology

This section draws a theoretical cross-fertilisation across the three approaches described. This meta-analytical reflection below constitutes a selection of synthetic reflections leading towards the need for a "phenomenological turn" that will embrace an appropriate theoretical lens for a southern scholarship. A southern scholarship is considered to counter the worldview that localised contexts should be read through the expectations of the dominant hegemonic northern interpretations (De Sousa Santos, 2018).

These evolutionary theoretical reimaginings have been sparked by the concern that a restrictive focus on a

decontextualised knowing, with its valuing of certainties and exactitudes, could be considered at odds with a local South African context which is attempting to understand the sustained continuation of injustices that characterise a post-apartheid South African context, especially within the education system. The initial euphoria of the 1990s, where the new democratic expectations were forged along social justice and equity priorities, was a fertile space for the ascendance of new research agendas that celebrated the emerging voices of those who were previously excluded from research focus. The choices aimed to represent those previously silenced. However, restrictive interpretivist paradigmatic worldviews could unintentionally be considered as preserving the autonomy of individualistic positionalities without adequate analysis of whose interests this agenda served.

The three authors suggest that reflecting on their research positions persuaded them to reconsider their original research operations. The canonical interpretivist LHR, and the traditional phylogeographical and phenomenological approaches were considered restrictive. Moreover, the theories of scholarship they drew on were almost exclusively from outside their local contexts. This perpetuates a northern gaze of surveillance against which they wished to engage robustly as part of the interest to self-define an interpretation of local contexts.

This does not mean that this grounded localism jettisons the scholarship from the north. Instead, the agenda juxtaposes the theoretical scholars' competing, overlapping, and divergent worldviews that emanate from various contextual spaces (Mignolo & Walsh, 2018). The sociological space and its epistemological underpinning preferences become the research design and analysis

subject. This allows us to question whether research traditions like phenomenography might be complicit in sustaining empiricist and positivist quests for absolute certainties. It also allows us to challenge whether lifehistory research, whilst originating in its interpretive home, could be complicit with promoting celebratism, activating naïve narcissism, and promoting vanity. Instead, the evolving trajectories suggest the need to understand the intersection between the inner texts of our subjective interpretations and the outer texts of context in dialogical interaction.

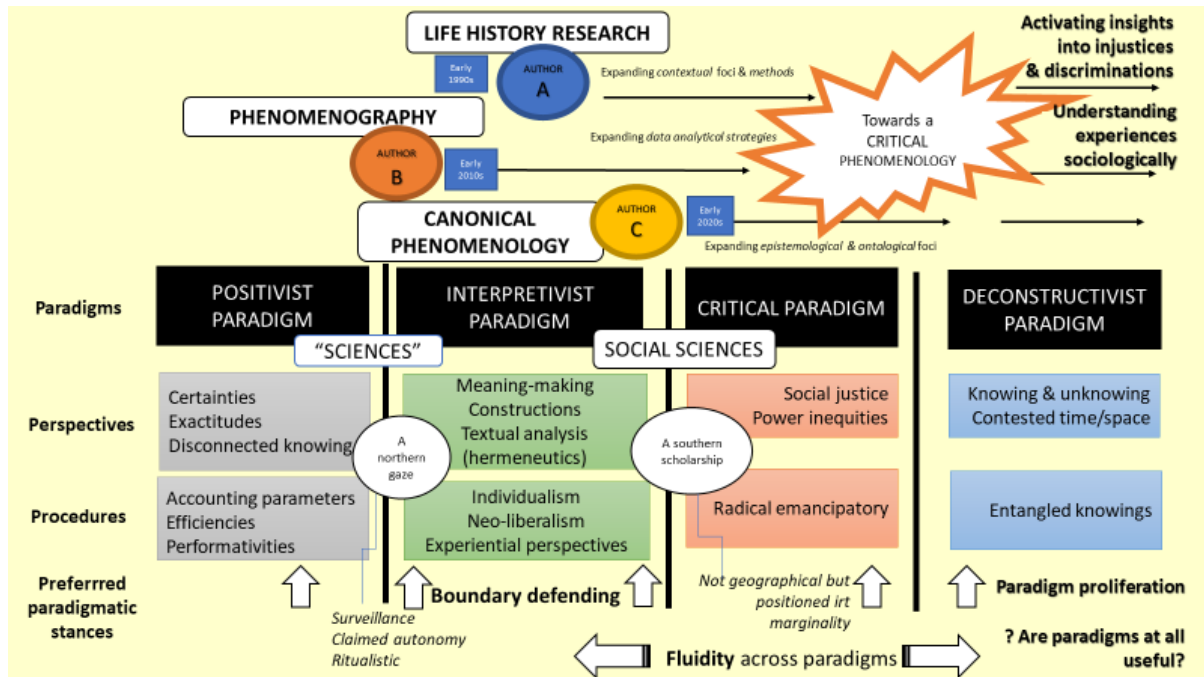
All the above synthetic reflective perspectives suggest the need to expand beyond being imitative of canonical ways of doing and representing experience in research. This article suggests that embracing a critical phenomenological approach allows for a blurring of paradigmatic boundaries. It allows for examining experience through the lens of power, marginality, and authoritarianist injustices. A further elaboration might be offered by a deconstructivist perspective which argues that knowing experience itself is unattainable (see diagram below). The process of developing insight into experiences will always be partial and entangled in the intersections between participants, contexts, texts and tools of research. The third co-author, therefore, pushes new dimensions of research agendas to suggest that a critical phenomenology, which has early beginnings in other research contexts tackling marginality, might be appropriate for the interpretation of the South African context, in its disappointments about the lack of deep transformation.

We suggest a phenomenological turn towards a scholarship that embraces dialogicality and relationality of perspectives which could contribute to the

intersection between localised contribution of a *southern scholarship* and normative hegemonic northern impositions. *Critical phenomenology* has emancipatory potential.

The diagram below depicts the hope of the reflective process questioning our collective, dialogical construction of research agendas undertaken in this article.

Figure 1: Towards a phenomenological turn: Developing critical phenomenology.



(Source: Authors' own)

This above diagram suggests that canonical research traditions reinforce the boundaries between paradigmatic positions. Protectionists of the paradigm tend to defend particular selected perspectives, which understandably bolster their epistemological worldviews. Moreover, preference is given towards established procedures which come to be circumscribed as dominant methodologies of the canonical paradigmatic home. However, this article has suggested that, especially within the realms of social sciences that explore multiplicities rather than singular universal truths, all of the paradigms could work in more collaborative rather than oppositional ways. A blurring and permeability across the paradigmatic landscape (as depicted in the diagram above) would likely permit cross-pollination of ideas, perspectives and methodological

options for research. The diagram suggests that researching lived experience cannot be confined only to the interpretivist paradigmatic home. We have argued that research production should expand beyond "boundary defending", and should be directed towards a continuing re-examination of our epistemological and ontological roots. We, therefore, support the notion of paradigmatic proliferation that occurs when borders are erased and fluidity promoted. Nevertheless, given our interests in southern scholarship, we are also aware of how the northern gaze influences the work of scholars who sit at the margins of hegemonic centres. Our concerns are consciously directed towards realising greater social justice in the interest of challenging discrimination and prejudices. We argue that a critical phenomenological approach to researching

experience would contribute towards a new sociological historicised and political project that research can become.

CONCLUDING REMARKS

We anticipate that this directive towards a critical phenomenological turn might be considered disrespectful of the canons of phenomenological research. However, the overall direction of the article is inspired by the resistance to being complicit with the surveillance of theoretical interpretations that emanate from outside the lived experiences of marginalised individuals and groups. Knowledge, power and context are tripartite entities that intersect and activate appropriate scholarship. We believe that this critical phenomenological approach has the potential to tackle the continuing endurance of social injustices, inequities and marginalities in profound and significant ways. Future research should extend this exploratory article to question how research agendas come to be chosen by individuals, groups or institutions, and how theoretical frameworks select perspectives and methodological choices in different contextual spaces. How do those on the periphery choose their theoretical research orientations? As varied researchers coming from divergent, transforming spaces and times, we have demonstrated the benefits of critically reviewing our own research experiences and choices. We, as researchers, can choose criticality as a conduit.

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