Journal of Education, 2023
Issue 92, http://journals.ukzn.ac.za/index.php/joe doi: http://dx.doi.org/10.17159/2520-9868/i92a11

Enhancing inclusive education through active student teacher participation: A case study of a university in Cape Town

Cina P. Mosito

Primary School Education-Foundation Phase, Faculty of Education, Nelson Mandela University, Gqeberha, South Africa
mositoc@gmail.com
https://orcid.org/0000-0003-4561-4236

(Received: 26 March 2023; accepted: 5 September 2023)

Abstract

Addressing the needs of a diverse learner population remains one of the most pressing education concerns of the 21st century. One of the issues debated is whether a responsive teacher education curriculum caters for the needs of student teachers, and how effective it is in preparing student teachers for teaching in diverse situations. It is essential to locate this issue within teacher education given the expectations on graduate teachers to deliver socially just pedagogies in school terrains that are often marked by deep inequalities. The Covid-19 pandemic has illuminated these inequalities, which have become the subject of all educational discourses. This study foregrounds student teacher voices regarding how they experienced curriculum reforms towards inclusive education in the Bachelor of Education (BEd) programme at a university in Cape Town, South Africa. Specifically, the study engages with how different modes of curriculum delivery position student teachers as both recipients and co-creators of the intended knowledge and skills—and who can engage in critical interaction with the learning material, and provoke self-scrutiny among student teachers and lecturers. This qualitative interpretivist study was framed around constructs of cognitive apprenticeship, guided participation, participatory appropriation, and border crossing. Data were collected through focus group interviews. It was found that an approach to learning in which student teachers are positioned as knowledge collaborators leads to the meaningful appropriation of some aspects of a curriculum on inclusive education.

Keywords: inclusive curriculum, cognitive apprenticeship, ubuntu, border crossing, student teacher participation

Introduction

Teacher education is immersed in rich descriptions of what makes a good teacher. At the heart of these descriptions is a dynamic interrelationship between people and the processes regarded as necessary enablers (and sometimes disablers) for teaching (Caires et al., 2012). Included, are types and forms of knowledge associated with the field of teaching (Department

of Higher Education and Training [DHET], 2015; Nakidien et al., 2021; Robinson & Rusznyak, 2020; Shulman, 1986; Shulman & Shulman, 2004), as well as psychological and sociological aspects of teacher identity (Alashwal, 2019; Hong et al., 2017; Sexton, 2008). This dynamic points to the ever-evolving attempts by those involved in teacher education to come to grips with tensions and influences in the process of learning to teach.

The Minimum Requirements for Teacher Education Qualifications (MRTEQ) policy in South Africa outlined a knowledge-mix in beginner teacher programmes that entails disciplinary learning, pedagogical learning, practical learning, fundamental learning, and situational learning (DHET, 2015; Robinson & Rusznyak, 2020). The MRTEQ emphasised the critical need for teachers to be conversant with the requirement for implementing inclusive education. Accordingly, there have been notable developments around capacitation of student teachers and in-service teachers in that area. For example, the research that birthed this article is part of a national project on inclusive education, Teaching for All. Teaching for All is a collaboration between the British Council South Africa, Department of Basic Education (DBE), University of South Africa, and MIET Africa (https://mietafrica.org/), which has developed teacher training modules and materials used in the Bachelor of Education (BEd) and Postgraduate Certificate in Education programmes in 10 South African universities. Underpinned by the understanding that teachers are agents of change, the Teaching for All material is aimed at providing "teachers with the skills, attitudes and knowledge to teach inclusively in diverse classrooms in diverse communities; thus, contributing to a reduction of children being excluded from education" (British Council South Africa, 2023, para. 2).

The research context and aim

The aim of conducting research among student teachers in one of these 10 universities was to assess the ensuing gains and insights in final-year student teacher knowledge after a hybrid approach to teaching and learning inclusive education had been followed. In particular, the study aimed to understand whether this had strengthened students' resolve to be inclusive when facing adversity. Furthermore, the study sought to understand how involving student teachers as primary participants in fortnightly project discussions on inclusive education, with exposure to new content from Teaching for All, had informed their transition from expert student teachers to novice teachers. Underlying this collaboration with student teachers is research that has demonstrated that when varied opportunities to learn content, pedagogical content, and general pedagogy are presented during teacher preparation, their future learners are more likely to reach high levels of achievement (Alashwal, 2019). Notably, this trickle-down effect between differentiated student teacher learning opportunities and later learner achievement has been noted by countries with top performing students in the Programme for International Student Assessment (PISA) and Trends in International Mathematics and Science Study (TIMSS).

I define expert student teachers as those in the final year[1] of the four-year BEd programme. This description is based on the assumption that student teachers have been sufficiently exposed to the knowledge and skills necessary for their successful completion of the BEd degrees they were registered for. During the first three years of their study, they have several teaching practice opportunities that expose them to school-based opportunities and challenges. In this regard, Shulman (1986) has suggested that such student teachers are now able to respond, with some relative authority, to the questions of where the content-related explanations they offer come from, how they decide on what to teach and how they present it, how they ask learners about it, and how they deal with misunderstandings. Supposedly, these students are ready to enter the teaching profession as novice teachers because they have successfully tackled the challenges associated with being student teachers. We can say with no doubt that they have become wiser and probably, successfully acquired intelligence in their final years of study. Along with this premise of expert student teachers, the project was informed by the theory of successful intelligence and the concepts of border crossing and cognitive apprenticeship (Rogoff, 1990; Sternberg, 2003; Yow et al., 2016).

Theoretical underpinnings on becoming an inclusive teacher

Border crossing

The main aim of the study was to examine the nature of tools and enablers that guide final-year student teachers in the process of transitioning from inclusive expert student teachers to inclusive novice teachers. Some researchers (Aikenhead & Jegede, 1999; Kerr & Ferguson, 2021) who have sought to understand how students navigate from one level of skill acquisition to another have used border crossing as a framing concept. According to these scholars, border crossing in this context, is used to refer to students who are transitioning from their familiar lifeworlds (for example, as university students) into the classroom space—which constitutes a form of cross-cultural experience that is steeped in many challenges and tensions. Although for some students this transition might be a smooth one, to others it can be a challenging and overwhelming process that, at times, determines whether the student teacher drops out or graduates without the necessary and requisite knowledge tools for the profession. Student teachers have had to cross many micro-cultural phases (such as breaking away from high school to adjusting to student life) while, at the same time, preparing to be student teachers and, within that learning, what it means to be an inclusive teacher. Each of these micro-cultures has its own governing rules of being, which in a way, serve as passports to arriving at their destination. These rules or passports include the norms, values, beliefs, expectations, and conventional actions typical of the native culture that students wish to acquire—in this case, inclusive teaching.

---

[1] Coincidentally, final-year students participating in the project also accepted jobs as relief teachers when the Western Cape Education Department solicited extra teachers to assist during the Covid-19 pandemic.

Students who demonstrate mastery in a particular micro-culture are considered intelligent. The meaning of intelligence has evolved from the traditional singular definition, in which it was regarded a fixed general mental ability characteristic of specific abilities, to the present conceptualisation of multiple and context-specific intelligence (Feuerstein & Jensen, 1980; Ng et al., 2022; Rogoff, 1995; Sternberg, 2019, 1998). Accordingly, this study aligns with the latter camp in seeking to understand how student teachers transition from being university students to being student teachers, up to a point where they consider themselves inclusive student teachers. Particularly, as expert inclusive student teachers, how did they tackle the challenges of inclusion associated with teaching and learning in the context of Covid-19? In this sense, the notion of intelligence is adopted as being context-specific and contextually generated. In line with this view, the intention was to uncover the direction of change, as well as the circumstances that propelled the changes that students claimed to have undergone, and the skills that they had acquired that empowered them to act and think in particular ways. As cautioned elsewhere, "change and activity are inherent to human existence, and therefore, it is not necessary to explain the fact of development" (Mosito, 2005, p. 15). Thus, the study gravitated towards uncovering how student teachers had appropriated knowledge on inclusive education in the face of adversities imposed by Covid-19. This is based on the assertion that during the three years before Covid-19 struck, they had acquired expertise as student teachers and were geared towards being novice teachers within a few months after graduation. Moments of pause brought by Covid-19 may have prompted reflections about self, which ordinarily, human beings do not spend time on (Buheji, 2020), and it is these reflections that I aimed to activate.

Conceptualising knowing and intelligence among student teachers

Intelligence is often used loosely to explain whether people have what it takes to execute a variety of cognitive tasks. A strong body of evidence emanating from the work of Howard Gardner suggested that being intelligent constitutes a wide mix of abilities distributed along mathematical, linguistic, musical, spatial, bodily-kinaesthetic, naturalist, interpersonal, and intrapersonal competencies (as cited in Dai, 2020; Gardner, 2000, 2020). This constitutes the traditional notion of intelligence, which excludes a variety of other forms of human intelligence. From the work of Sternberg, his theory of successful intelligence argued for intelligence as "one's ability to set and accomplish personally meaningful goals in one's life, given one's cultural context" (2020, para. 4). Others have gone further to demonstrate that even though the brain houses the engine regulating many cognitive functions, those functions are not static or fixed because there is a propensity for modification under well-intentioned mediation (Kozulin et al., 2010). Therefore, of interest in this study, was to understand what enabled particular intellectual gains in student teachers preparing to be teachers. In this respect, conceptual guidance came in the form Sternberg's theory of successful intelligence (2000), and Rogoff's (1990, 1995) research on participatory appropriation and its related sub-concepts: guided participation and cognitive apprenticeship.

Sternberg's (1998, 1999, 2003) work was appealing because of his assertion that intelligence is a form of developing expertise that leads to the state of being successfully intelligent. He defined successful intelligence as

> (1) the ability to achieve one's goals in life, given one's socio-cultural context (2) by capitalising on strengths and correcting or compensating for weaknesses, (3) to adapt to, shape, and select environments, and (4) through a combination of analytical, creative, and practical abilities. (Sternberg, 2005, p. 189)

With this four-item analysis, Sternberg (2005) outlined the characteristics of a successfully intelligent individual. Item 1 involves developing meaningful and coherent goals and having the skills and dispositions to reach those goals. The point of departure in this regard, is what individuals have done to achieve their goals. In the case of this study, it would imply whether final-year student teachers understood the goal of acquiring knowledge, skills, and attitudes that resonate with inclusive education, and what they did to achieve these goals as individuals.

On the second item, successfully intelligent individuals are those who are aware of their strengths and weaknesses within a particular job or field. Such individuals explore what they can do to overcome their shortcomings (Sternberg & Williams, 2001). Of interest here would be whether student teachers had identified their strengths and found ways of tackling the challenges associated with inclusive education, and how they had married both towards developing the best versions of what they desired to be as inclusive teachers. Item 3 defines successfully intelligent individuals as those who can adapt, shape, and adopt what leads to their success. This perspective highly resonates with one aspect of this study—of seeking to learn how knowledge, acquired on campus before the Covid-19 restrictions, was applied when student teachers were undoubtedly faced with a myriad of challenges associated with remote teaching and learning. The fourth and final item in this theory is said to involve a broad range of skills, usually measured through tasks of intellectual and academic nature. The value of this form of intelligence is recognised, nevertheless it was not used to frame this study. My main desire was to engage in meaningful conversations (see the methodology section) that would assist to probe, collect instances of, and analyse the other three items that point to being a successfully intelligent student teacher, especially in the face of adversity.

The theory of successful intelligence was relevant for this study because of its central aim of preparing student teachers to develop identities and knowledge necessary for applying inclusive education pedagogies in diverse contexts. The theory enabled a probe into how students described their expertise in the process of learning to teach and being immersed in a curriculum that advocates inclusivity. Additionally, where did they draw the strength to compensate for the challenges brought by Covid-19? How and what did they adapt that shaped their becoming? What choices did they make that helped them stay afloat, even during the most difficult of times? Equally important, what were the enabling mechanisms used to obtain answers to these questions? To address the final question regarding enabling mechanisms, I interrogate the concept of cognitive apprenticeship and its related concepts of guided participation and participatory appropriation.

Cognitive apprenticeship as a model for student teacher learning

Given the prevailing understanding that the process of coming to know is dependent on both intra (described above) and inter mechanisms, the study leaned towards a theory that explained the latter. Barbara Rogoff's (1995) explanations were appealing because they provided a platform that enabled an engagement with how student teachers had benefitted from learning in a relevant context under the guidance of, and with, more knowledgeable others. The framing concepts were cognitive apprenticeship, paired with guided participation and participatory appropriation.

Informed by Piaget's and Vygotsky's views on human development, Rogoff explored human development by drawing on how children come to know, learn, and acquire necessary skills in specific sociocultural contexts. She argued that:

> Children take part in the activities of their community, engaging with other children and with adults in routine and tacit as well as explicit collaboration (both in each other's presence and in otherwise socially structured activities) and in the process of participation become prepared for later participation in related events. (Rogoff, 1995, p. 139)

With a view that is almost aligned to Sternberg's theory of successful intelligence, Rogoff (1990) advocated that in studying and making sense of how people come to know, there is a need to tie such a process to the context, the goal of the activity, and its interpersonal and sociocultural contexts. Although her primary unit of analysis was often the child, the theory holds promise for other interactions aspiring to promote human development. The kind of theorisation Rogoff advocated privileges the intricate relationship between culture and development. Culture, in this instance, includes processes followed in coming to know—as opposed to school settings where there is an intentioned process of teaching, in which learners are instructed how to do, think, act, and so on. Studies that explored knowledge and skill acquisition in various contexts have demonstrated a different pattern of engagement. Children appear to

> attentively engage in the activities of their community, together with the people around them, who provide access to observe, show children how to contribute, support children's efforts, and provide pointers for improvement. This is a mutually constituting process, in which individual, interpersonal, and cultural/community aspects are all crucial. (Glăveanu, 2011, p. 409)

This process is likened to an apprentice learning a skill under the tutelage of a more skilled person, whom they observe and emulate. Rogoff (1995) described this cultural way of learning as intent community participation that is characterised by high levels of observing and pitching in a community where learners are participants in community life. Among African scholars, a similar approach is described, using the concept of *ubuntu* (Mukwambo & Phasha, 2016). Ubuntu (or botho in Sesotho) while difficult to pin down to a specific aspect, can be described as

> the understanding of a person as located in a community where being a person is to be in a dialogical relationship in this community. A person's humanity is dependent on the appreciation, preservation and affirmation of other person's humanity. (Mawere & van Stam, 2016, p. 292)

It has further been argued that "the foundational gesture of Ubuntu is the manner of giving, as a reciprocal act of sharing in resources, deep connectedness, and solidarity," which then implies the often-loose definition of humanness, and that a person is a person through other persons (Nolte & Downing, 2019, p. 9). The pulling factors to the concept and philosophy of ubuntu are its underlying values of caring, respect, and connectedness that also drive inclusive education and inclusivity. The main focus of inclusive education is to create an education system that celebrates and caters for diversity in its multiplicity. The study drew from this wisdom and invited student teachers to be participants in fortnightly engagements and discussions on the Teaching for All curriculum and learning material on inclusive education. Interest was on whether arguments and discussions initiated by lecturers provided a platform for observation and pitching from which students could learn, among other things, appropriation of the language of inclusion, collaboration with colleagues, and arguing for one's point of view with sufficient empirical evidence and respect for difference of opinions.

Many studies have demonstrated that although the teacher's knowledge remains key, learning to become a teacher is a complex process that is dependent on many other factors. All these factors point towards the development of a professional identity (Friesen & Besley, 2013). Notably, the process is saturated with highs and lows from which some student teachers have related important moments of growth that helped them to carve a teacher identity (Meijer et al., 2011). There is also a strong argument that the context within which this knowledge develops is fundamental (Cranton & Carusetta, 2002; Fernández-Río et al., 2016). As a result of this mix of factors, teacher education itself is likened to a complex set of interrelated systems (Sexton, 2008). It is all these nuances that our (students, the author, and other colleagues) interactions, as a form of participatory appropriation with students and cognitive apprenticeship, aimed to support.

Research methodology and design

All the necessary ethical principles were adhered to at different stages in the study. For example, ethical clearance and permission to conduct the research were sought from the relevant university committees at the inception of the larger Teaching for All project, which led to the component of the study that led to this paper. The rights of participants were considered—they all signed a consent form that stipulated that their participation was purely voluntary, and that they were permitted to withdraw from the study at any point if they so wished. The consent form also outlined that participants' confidentiality, anonymity, and privacy would be always ensured. The researcher obtained permission from participants to audio-record focus group discussions. The study was located within the interpretivist paradigm. This paradigm allowed the researcher to locate the details and multiple realities of the participants' different insights on pedagogies that had assisted them to overcome

challenges associated with remote learning and teaching during the Covid-19 lockdown (Yin, 2013). The case study was conceptualised around the constructs of border crossing, successful intelligence, and cognitive apprenticeship.

Cohen et al. (2011) defined a case study as a specific instance that is frequently designed to illustrate a more general principle. Utilising a case study in qualitative research offers researchers the privilege to relate with participants in their social space using interviews. Engaging with participants in their natural settings allows researchers to engage with their feelings. In this regard, a case study enabled the researcher to obtain rich and in-depth data.

Research method

The study employed one focus group discussion as the main data collection instrument. The focus group discussion was held with four undergraduate students who were registered for the inclusive education module. A focus group discussion comprises unstructured group interviews where the focus group leader facilitates discussion among the participants around the matter of interest (Engel & Schutt, 2009). The facilitators of the discussion had an intense focus group discussion with the participants for two hours. The discussion revealed insightful opinions, as well as differences and similarities in views and experiences of the participants. The discussion was steered by an interview guide of open-ended questions. These questions sought to establish

1. How, in their journey as students, might they have felt like they were migrants crossing into unknown native spaces?
2. Where in their journey did they feel that their learning had placed them by the end of 2019 when they completed Year 3?
3. What was it about their learning that they felt facilitated movement from their status as migrants to natives?
4. What borders did they feel Covid-19 might have re-imposed on their student lives, if any?
5. How might exposure and participation in the project have assisted them in dealing with renewed feelings of being migrants? and
6. What had they found most difficult during remote learning, and how had they managed those difficulties?

Open-ended interviews were considered more suitable than other forms of interview for various reasons. For instance, they allowed student teachers to share their feelings, opinions, experiences, attitudes, and beliefs, which the facilitators of the discussion could probe. From this dialogue and sharing of experiences, the researcher sought to interpret how the intended cognitive apprenticeship and participatory appropriation might have assisted students in crossing multiple borders during their journey as inclusive student teachers.

Participants' description

The study used purposive and convenience sampling to select participants. Purposive sampling is the process of selecting individuals who can offer an authentic account of the phenomenon under study, and who share sufficient common experiences with others to represent a group (Yin, 2013). Convenience sampling, also referred to as accidental sampling, is a non-probability sampling that involves study participants who are available within the context most convenient for a researcher. All the fourth-year students in different phases[2] of the BEd programmes at one university in the Western Cape were invited to join fortnightly meetings where different aspects of the new curriculum on inclusive education were deliberated. Ten students had responded to this call and had engaged in fortnightly curriculum discussions with their lecturers. Four of these 10 students availed themselves for the focus group interviews that yielded the data that informed this paper. For a qualitative study that sought a rich and in-depth understanding of the spill-offs of a particular approach to teaching inclusive education on student teachers, a sample of four was advantageous because it allowed the focus group facilitators to probe responses and, in the process, generate a nuanced unfolding of students' experiences. The researcher chose this university because it was easily accessible, and because it offered compulsory inclusive education modules. These students were approached on the assumption that being in the fourth year of study, they would be able to present first-hand information on various experiences related to border crossing in their journey as students.

Data analysis

Analysing data in qualitative research involves the following steps: (1) organising all data into smaller chunks of information such as sentences and individual words or stories to get a sense of what the small chunks of information are revealing, (2) identification of categories and themes, interpretation of single instances, identification of patterns, and (3) synthesis and generalisation (Miles et al., 2013). The data were analysed by coding and categorising them into major themes and sub-themes that emerged from the focus group discussions. A matrix of the main and sub-themes was presented after coding opinions and experiences of the constructs of pedagogical border crossing, cognitive apprenticeship, and participatory appropriation. The participants were given codes ranging from ST1 to ST4.

---

2 These are, namely, Foundation Phase, Intermediate Phase, and Senior Phase and Further Education and Training student teachers.

The findings: Student teachers' journey to becoming inclusive teachers

Border crossing

Participants shared vivid accounts of their journey as student teachers, which indicated that they experienced a mix of familiar and unfamiliar contexts and experiences. All the students revealed that during their first year of study at the university, they had, for the first time, (1) been taught by lecturers from a different race and studied with people from a different race, (2) to consistently speak English, (3) to do things in a manner that was different from how they used to do things at high school, and (4) dealt with an unimaginable amount of freedom that came with being far away from the constant nudging of their parents. The general feeling they could all recall was of being fearful in this new world:

> I thought learning was all about writing from the chalkboard and being told everything without really giving you the opportunity to think for yourself. You know in high school how they spoon-feed you, you know? . . . Here, they move. . . . Imagine I had been learning everything in isiXhosa, even though I was at high school. Here I had to kumsha all the time! At first year, I used to use XhomLish, a combination of Xhosa and English. . . . Also, when I was at school I could just . . . to the teacher to ask anytime. But here, you must make an appointment, write email (laughs), I did not know email! But now, I know I don't have to stand in queues waiting for something or someone if I make that appointment. (ST1)

Development over three years

All participants agreed that by the end of 2019, they had become natives of the space that was very foreign to them in 2017. For example, they were now familiar with how to use computers, knew where to locate things on campus, and understood what was expected of them as university students and student teachers. All of them attributed their growth over time to learning how to work with others in groups. Below are some of their articulations:

> By 2019, what had helped me to grow was group work. I discovered I learned better when I explain in a group. At first year, we were not comfortable with each other but now we are comfortable and can share your own views when with others. (ST2)

> The meetings we had fortnightly also added a layer to our comfort. I got to know some people here better outside the classroom space. . . . Those meetings helped to develop a space of knowledge and respect. In previous years, we were learning in isolation, in lecture rooms only. I got to know my classmates better—even where they come from . . . the meetings helped us a lot, to form a family away from home. (ST1)

> Also . . . student lecturer relations. I have never been taught by Dr 1, Dr 2, and Dr 3 but I met them in those meetings and learned a lot from them and about them. Also

> having that equal room whereby lecturers don't see us as students but as people that can contribute towards change, mainly inclusive education. (ST2)

Furthermore, with time, they developed the confidence to contribute and add value to the subject of inclusion:

> I was excited and confident. It makes me remember in 2019 when all of our lecturers invited us to present at the postgraduate conference. It boosted our confidence that you believed in . . . our capabilities, that we can speak with authority when it comes to inclusion. (ST2)

> It also added a certain ideology that I am an inclusive agent. Even in school, I managed to include a learner from Zimbabwe who did not understand because of language. I realised when I met this learner that all those things we learn in lectures and these meetings, that now it's real. . . . I reached by learning a few words in the learner's language like how to say "Hi" in Shona. . . . These are some of the ideas from Teaching for All—learn a little about the learners. (ST1)

Transition from migrants to natives

Students were asked to share thoughts on whether they still felt like the migrants they had felt they were prior to joining the project. All of them indicated that they were, at first, scared and uncomfortable about interacting closely with the lecturers:

> Yes! (All)

> I was scared of you, I never thought I could sit with you like this! I used to distance myself in class. . . . Being here with you all has given us comfortability that we are all humans. (ST1)

> Now I can walk with you even in the street Doc. Those who don't know you this way ask, "How is she?" And I tell them, "She is the best" (laughs). . . . Others tell me they want to ask you this and that . . . and I am now the one who encourages them to be brave and approach you. (ST3)

As ST3 above asserted, a communal approach to learning about inclusion also countered the debilitating effect of power, which occurs when there is distance between lecturers and students. In relation to this disclosure, it was necessary to understand what bearing that would have on their interaction with their own learners. The students' responses indicated that being accessible to learners enhanced learning and did not make one a weak teacher. Over and above, it gave them opportunities to envisage diverse career opportunities in line with their qualifications:

> Yes when Mrs . . . first came to our class I was at an advantage because I had already met her at these meetings. There were no walls I had to climb. . . . It was easier for me to deal with the content because of my familiarity with the lecturer. (ST2)

> I have been in regular meetings with my lecturers. Some are Drs, others HoDs, what can stop me from being like them, a simple boy from the township? What I can say is these meetings have motivated me, they have given me new dreams. (ST4)

> When it comes with my teacher identity, I used to think small but now I feel like a giant. I don't do petty things because I am great. I walk with giants and see myself as an example. (ST1)

> Speaking about impact in the community, I have also learned to take responsibility. I took initiative to even write to the mayor in my community to provide sporting facilities. (ST2)

These student teachers had also experienced shifts in pedagogical approaches from when they first enrolled in the programme. ST1 recalled how elaborate and colourful pictures dotted in classrooms did not make sense to her:

> I am thinking about the classrooms I teach in, how colourful they are. I did not understand why and now I see value to it.

Generally, all the students felt that they had made qualitative gains as expert student teachers.

> When I was a first-year student during teaching practice, I was evaluated by Dr . . . and he gave me 50%. I got evaluated by him again this year and I got 86%. When I read his comments, comparing to first year, I saw how far I have come, I have grown. (ST2)

> Maths in first year . . . oh it was disaster. Only to find that now I got a job for maths, which I was so scared of teaching. But you know you change, especially through inclusive. If I was not here with you probably, I would not have become as confident and accepted to teach maths! (ST3)

> One thing I have learned about teaching is that the more you make mistakes, is the more you learn. (ST4)

> When we speak to students in other faculties, we realise in education we do things differently. We are given a chance to correct our mistakes. It also makes you a better teacher because it teaches how to do things. (ST3)

Managing tensions imposed by Covid-19

Participants shared that Covid-19 had challenged them in ways they had not expected. They realised for the first time that being resident students conferred privileges they had taken for granted and not appreciated fully. Participants all concurred that learning during the pandemic was the most challenging exercise. In addition, being back at home meant they had to strike a balance between what was expected of them as university students, and what it meant to be respectful children and members of communities where they lived. They gained

the wisdom to realise that to survive as students off campus meant educating their families about what it means to have a university student in the house:

> At first, I felt like a first-year student! So much was going on. People are talking about assignments that they submitted, how did I miss that? So much was going on! (ST3)

> Honestly, this year made me feel like a first-year. Everything that I know it's like I don't know it. I was not prepared. . . . At home, parents don't understand we are students. When you explain you are studying they think you are playing on the phone. (ST1)

> If my parents see me on my phone, I'm playing. Immediately when I'm holding my laptop they think that is when I am working. I had to be very smart and open the laptop and phone at the same time when in fact I was working on the phone. . . . So there are expectations from parents, siblings and everyone . . . to play a role of being at home. There are expectations coming from your lecturers that you should be attending lectures, submitting assignments. (ST2)

These difficult circumstances led students to be appreciative of being resident students.

> Being in a lecture hall is quite different from the video you receive from the lecturer. From one video a lecturer has posted, it takes a while to directly connect with the lecturer if you don't understand something. If we all type our questions, and there are say 200 of us . . . the possibility is you are never gonna get answered or you will get answered in the next two weeks. . . . I can say some of things we really appreciate on campus is making time, being accessible to us because this physical attendance works much better. (ST2)

> Yes, as ST2 said . . . WhatsApp messages, sometimes you miss important messages like reminders to submit an assignment because there are so many messages to read through. (ST3)

> I stayed at home in the township before. It was more difficult studying during Covid-19 lockdown because I come from a township where you are surrounded by shacks so these shacks have music. One of the things that ST2 said, like, when you are busy with your studies and a neighbour comes, it was difficult for me to say, "Go away I am studying." I had to hide inside most of the time so that they can think I am not there because if I go out I cannot come back to studies. (ST4)

> Another big and urgent thing was the pandemic. Now people come, knock at your door and you think it is important. . . . It is difficult for you to reject this person because it is your neighbour. Also, this can be an older person, an adult who wants to send you to the shops you can't just say no. . . . Then at 4 am, still, the music is loud! I can't go to my neighbour because it is his premises. All the time I try to read, sleep,

> the music is up. When I finally went there, the place is dark—they are sleeping but the music is playing loud for the whole street! (ST1)
>
> Even at other times, it is the church with my neighbours. Even traditional healers as well are playing drums. So you see, you can't do anything about that. And they slaughter and sing. And, you see, it's useless. You go out and join them because you can't study anyway. (ST1)

Lessons from inclusive education

Considering all the difficulties students experienced, ignited curiosity to know if being students of inclusive education had added value to their lives. The most striking response was from ST2:

> The pandemic made me understand the importance of digital collaboration and the importance of collaboration with parents. I saw that collaboration importance because now teachers began to value the collaboration of parents. Collaboration, they were not prepared to do it but now they have to. Yes, that is I think in Unit 3 of Teaching for All.

Discussion: Towards a pedagogy of inclusive co-creation of knowledge

At first, the reason students were invited into fortnightly meetings was because I wanted to involve them as assistants during the different phases of the Teaching for All project. Soon after, the terms of their engagement changed because they had interesting feedback to give about their experience of lectures based on Teaching for All material. They were then invited to critique and give inputs to the curriculum, and to share their experiences as well as the experiences of other students on how they were constructing their knowledge, based on the content of the Teaching for All project. This led to the aim of the component of the project birthing this paper during the data collection phase, which was to investigate the likelihood of curriculum renewal when student teachers are positioned as co-creators of knowledge with their lecturers.

Border crossing in teacher education

The student teachers in this study have had many borders to surmount. The most glaring of these borders were racial, cultural, and language differences. Students soon discovered that learning at university is not about receiving knowledge—but that it involves a dialogic exchange of ideas. As ST1 pointed out,

> They were feeding you answers to make you understand, here they move. . . . Imagine I had been learning everything in isiXhosa, even though I was at high school. Here I had to kumsha all the time! At first year I used to use XhomLish, a combination of Xhosa and English. As long as they understand me, or else I would be left behind.

This speaks to individual stores of successful intelligence which (1) helped students to achieve their goals in life given their new socio-cultural context, which was the university by (2) capitalising on own strengths and correcting or compensating for weaknesses and (3) adapting to, shaping, and selecting environments (Sternberg, 2005; Sternberg, 2020).

Potential of collaboration to break walls of fear and disabling power

A significant finding of the study is that collaborating and interacting with lecturers outside the classroom dissipated fears that students had harboured about their lecturers. Participatory appropriation (Rogoff, 1990) appears to have been an enabling tool in dispelling these fears. The assurance we gave them—that they were our equals in the project—cast us as human beings. Initially, they would listen to insights and arguments from us about what works and what does not. Gradually, they appropriated the jargon we were using in our discussions and began to question, make suggestions, and interpret what had transpired in project meetings with us.

Equally important is how, outside the classroom space, students became conscious of and applied the values of ubuntu—notably, respect for self, the context, and connectedness with others. For example, ST1 mentioned that "Now when I see S21 I see him as my brother. When I do wrong he is happy to correct me."

Optimising moments of uncertainty

On another level, students experienced what Buheji (2020) referred to as optimisation of moments of pause during Covid-19. During moments of difficulty, they could identify privileges that they had taken for granted such as easy access to lecturers and residence life. ST3 reflected on how and what he had considered a setback when he had to set up an appointment to see a lecturer thus became akin to walking with giants. This "walking with giants" moment became something they all aspired to. ST4, in particular, shared that he now aspires to be more than just a teacher because he sees himself as a professor in the future.

Appropriation of the language of description and analysis

One of the observations made by the four participants was their use of jargon associated with inclusive education or their lecturers' use of language. This resonates with Rogoff's (1990) notion that intent community participation that is characterised by high levels of observing and pitching leads to emulation of both doing and thinking as evidenced from the more knowledgeable other (Glăveanu, 2011).

Conclusion

The study set out to establish the potential gains of involving student teachers as successful intelligent knowledge co-creators in a research project. Through their vast experiences, they demonstrated ability to adapt and shape their learning when faced with particular circumstances, guided by the constant monitoring of their goals. Conceptualised on specific

theoretical constructs—border crossing, cognitive apprenticeship, participatory appropriation, and successful intelligence—the study brought to the fore the centrality of ubuntu, caring, and communal constructivism in teacher education. Even though these three did not overtly drive the study, the concepts appeared to be embedded in many of the students' utterances during focus group discussions. This then suggests a need to intentionally dialogue on all the values entrenched in ubuntu such as caring, connectedness with the other, and respect for others. The new curriculum that agitated for the conceptualisation of this project involving student teachers and their lecturers features ubuntu as one of the philosophies that should drive inclusive education in South African schools. Students' connectedness with their communities and the ability to empathise with the realities of community members also signalled deep assets of caring that we might have overlooked in our fortnightly discussions. As we reflected on where the students' frank discussions could be leading to, we were also reminded of a need to gaze at our own work through an Afrocentric lens that reflects lessons from the communal approach, which informed our interactions (Mukwambo & Phasha, 2016). The analysis of the interactions and discussions with students has triggered thoughts related to communal Afrocentric initiatives such as *letsema* and the promise such an approach holds for those who claim to be inclusive. Letsema, a Sotho (Sepedi, Sesotho, and Setswana) word that means working together, is said to depict a situation where people of the same community voluntarily offer their services and work together to achieve individual and community development (Lebeloane & Quan-Baffour, 2008; Letseka, 2013).

Individual and communal development that transcended the here-and-now for those who were involved in this project was the main intent and, therefore, encapsulated the spirit of letsema. As I seek to explore ways in which educational interactions can be read through, and guided by, Indigenous knowledge philosophies, letsema is one of those concepts that will be on my theorisation radar for future projects. As an Afrocentric approach to setting up a community of practice that enables participants to help one another through being task orientated and motivated by reciprocity, it resonates with our understanding that social action, collaboration, and dialogue are the genesis of a truly impactful teaching and learning environment. Arriving at the realisation that Afrocentric approaches can be harnessed to explain how learning best takes place, is one of the major theoretical contributions of this study.

References

Aikenhead, G. S., & Jegede, O. J. (1999). Cross-cultural science education: A cognitive explanation of a cultural phenomenon. *Journal of Research in Science Teaching*, *36*(3), 269–287. https://doi.org/10.1002/(SICI)1098-2736(199903)36:3%3C269::AID-TEA3%3E3.0.CO;2-T

Alashwal, M. (2019). Essential professional qualities and skills of an effective and modern teacher. *American Journal of Educational Research, 7*(12), 983–988. doi:10.12691/education-7-12-13

British Council South Africa. (2023). *Mainstreaming inclusive education in South Africa.* http://www.britishcouncil.org.za/programmes/education/teaching-all

Buheji, M. (2020). Optimising "moments of pauses": A reflections from Covid-19 pandemic. *International Journal of Psychology and Behavioral Sciences, 10*(4), 85–92. http://doi:10.5923/j.ijpbs.20201004.01

Caires, S., Almeida, L., & Vieira, D. (2012). Becoming a teacher: Student teachers' experiences and perceptions about teaching practice. *European Journal of Teacher Education, 35*(2), 163–178. https://doi.org/10.1080/02619768.2011.643395 Cohen, L., Manion, L., & Morrison, K. (2011). *Research methods in education* (7th ed.). Routledge.

Cranton, P., & Carusetta, E. (2002). Reflecting on teaching: The influence of context. *International Journal for Academic Development, 7*(2), 167–176. doi:10.1080/1360144032000071288

Dai, D. Y. (2020). Introduction to the special issue on rethinking human potential: A tribute to Howard Gardner. *Journal of the Education of the Gifted, 43*(1), 3–11. https://doi.org/10.1177/0162353219892101

Department of Higher Education and Training. (2015). *Minimum requirements for teacher education qualifications*. https://www.dhet.gov.za/Teacher%20Education/National%20Qualifications%20Framework%20Act%2067_2008%20Revised%20Policy%20for%20Teacher%20Education%20Quilifications.pdf

Engel, R. J., & Schutt, R. K. (2009). *The practice of research in social work* (2nd ed.). SAGE.

Fernández - Río, J., Sanz, N., Fernández -Cando, J., & Santos, L. (2017). Impact of a sustained cooperative learning intervention on student motivation. *Physical Education and Sport Pedagogy, 22*(1), 89–105. doi:10.1080/17408989.2015.1123238

Feuerstein, R., & Jensen, M. R. (1980). Instrumental enrichment: Theoretical basis, goals, and instruments. *The Educational Forum, 44*(4), 401– 423. doi:10.1080/00131728009336184

Friesen, M. D., & Besley, S. C. (2013). Teacher identity development in the first year of teacher education: A developmental and social psychological perspective. *Teaching and Teacher Education, 36*, 23–32. https://doi.org/10.1016/j.tate.2013.06.005

Gardner, H. E. (2000). *Intelligence reframed: Multiple intelligences for the 21st century* [Kindle ed.]. Hachette.

Gardner, H. (2020). Of human potential: A 40-year saga. *Journal for the Education of the Gifted, 43*(1), 12–18. https://doi.org/10.1177/0162353219894406 Glăveanu, V. (2011). On culture and human development: Interview with Barbara Rogoff. *Europe's Journal of Psychology, 7*(3), 408–418. doi:10.5964/ejop.v7i3.141

Hong, J., Greene, B. A., & Lowery, J. (2017). Multiple dimensions of teacher identity development from pre-service to early years of teaching: A longitudinal study. *Journal of Education for Teaching: International Research and Pedagogy. 43*(1), 1–15. doi:10.1080/02607476.2017.1251111

Kerr, J., & Ferguson, K. A. (2021). Crossing borders in initial teacher education: supporting translations in the inner-city practicum. *Education, Language and Sociology Research, 2*(3), 16–38. doi:10.22158/elsr.v2n3p16

Kozulin, A., Lebeer, J., Madella-Noja, A., Gonzalez, F., Jeffrey, I., Rosenthal, N., & Koslowsky, M. (2010). Cognitive modifiability of children with developmental disabilities: A multicentre study using Feuerstein's instrumental enrichment—basic program. *Research in Developmental Disabilities, 31*(2), 551–559. doi:10.1016/j.ridd.2009.12.001

Lebeloane, L. O., & Quan-Baffour, K. P. (2008). Letsema: A way of inculcating and preserving African Indigenous Knowledge in the youth through formal education in the 21st century. *Journal of Educational Studies, 7*(2), 43–49. http://hdl.handle.net/10500/14451

Letseka, M. M. (2013). Understanding of African philosophy through philosophy for children (P4C). *Mediterranean Journal of Social Sciences, 4*(14), 746–753. http://dx.doi.org/10.5901/mjss.2013.v4n14p745

Mawere, M., & van Stam, G. (2016). Ubuntu/unhu as communal love: Critical reflectionson the sociology of ubuntu and communal life in sub-Saharan Africa. In M. Mawere & N. Marongwe (Eds.), *Politics, violence and conflict management in Africa: Envisioning transformation, peace and unity in the twenty-first century* (pp. 287–304). Cambridge University Press.

Meijer, P. C., de Graaf, G., & Meirink, J. (2011). Key experiences in student teachers' development. *Teachers and Teaching Theory and Practice, 17*(1),115–129. doi:10.1080/13540602.2011.538502

Miles, M. B., Huberman, A. M., & Saldana, J. (2013). *Qualitative data analysis: A methods sourcebook*. SAGE.

Mosito, C. P. (2005). *Cognitive change in out-of-school learners in a Western Cape intervention programme* [Doctoral thesis, University of Cape Town, South Africa]. OpenUCThttp://hdl.handle.net/11427/8066

Mukwambo, M., & Phasha, N. (2016). An inclusive curriculum from an Afrocentric perspective. In N. Phasha & J. Condy (Eds.), *Inclusive education: An African perspective* (pp. 55–86). Oxford University Press.

Nakidien, T., Singh, M., & Sayed, Y. (2021). Teachers and teacher education: Limitations and possibilities of attaining SDG 4 in South Africa. *Education Sciences, 11*(66), 2–13. https://doi.org/10.3390/educsci11020066

Ng, K. Y., Ang, S., & Rockstuhl, T. (2022). Cultural intelligence: From intelligence in context and across cultures to intercultural contexts. In R. J. Sternberg & D. D. Preiss (Eds.), *Intelligence in context: The cultural and historical foundations of human intelligence* (pp.177–200). Palgrave Macmillan.

Nolte, N., & Downing, C. (2019). Ubuntu—the essence of caring and being: A concept analysis. *Holistic Nursing Practice, 33*(1), 9–16. doi:10.1097/HNP.0000000000000302

Robinson, M., & Rusznyak, L. (2020). Learning to teach without school-based experience: Conundrums and possibilities in a South African context. *Journal of Education for Teaching, 46*(4), 517–527. https://doi.org/10.1080/02607476.2020.1800408

Rogoff, B. (1990). *Apprenticeship in thinking: Cognitive development in social context*. Oxford University Press.

Rogoff, B. (1995). Observing sociocultural activity on three planes: Participatory appropriation, guided participation, and apprenticeship. In J. V. Wertsch, P. del Rio, & A. Alvarez (Eds.), *Sociocultural studies of mind* (pp. 139–164). Cambridge University Press.

Sexton, D. M. (2008). Student teachers negotiating identity, role, and agency. *Teacher Education Quarterly, 35*(3), 73–88. https://scholarworks.sjsu.edu/cgi/viewcontent.cgiarticle=1030&context=elementary_ed_pub

Shulman, L. S. (1986). Paradigms and research programs in the study of teaching: A contemporary perspective. In M. C. (Ed.), *Handbook of research on teaching* (3rd ed., pp. 3–36). Macmillan.

Shulman, L. S., & Shulman, J. H. (2004). How and what teachers learn: A shifting perspective. *Journal of Curriculum Studies, 36*, 257–271. https://doi.org/10.1080/0022027032000148298 Sternberg, R. J. (2019). A theory of adaptive intelligence and its relation to general intelligence. *Journal of Intelligence, 7*(4), 23. https://doi.org/10.3390/jintelligence7040023

Sternberg, R. J. (1998). Abilities are forms of developing expertise. *Educational Researcher, 27*(3), 11–20. doi:10.3102/0013189X027003011

Sternberg, R. J. (1999). Intelligence as developing expertise. *Contemporary Educational Psychology, 24*(4), 359–375. https://doi.org/10.1006/ceps.1998.0998

Sternberg, R. J. (2000). The theory of successful intelligence. *Gifted Education International 15*(1), 4–21. https://doi.org/10.1177/026142940001500103

Sternberg, R. J. (2003). *WICS: A theory of wisdom, intelligence, and creativity, synthesized.* Cambridge University Press.

Sternberg, R. J. (2005). The theory of scucessful intelligence. *International Journal of Psychology, 30*(2), 189–202. https://tinyurl.com/mukajr7a

Sternberg, R. J. (2020). *Robert J Sternberg: Professor of psychology—Cornel University.* http://www.robertjsternberg.com/successful-intelligence#:~:text=Successful%20intelligence%20is%20defined%20as,life%2C%20given%20one's%20cultural%20context

Sternberg, R. J., & Williams, W. M. (2001). *Educational psychology.* Allyn & Bacon.Yin, R. K. (2013). *Case study research: Design and methods*. SAGE.

Yow, J. A, Eli, J. A., Beisiegel, M., & McCloskey, A. (2016). Challenging transitions and crossing borders: Preparing novice mathematics teacher educators to support novice K-12 mathematics teachers. *Mathematics Teacher Education and Development, 18*(1), 52–69. https://eric.ed.gov/?id=EJ1103490