

# Beginner teachers' experiences of transdisciplinary demands of a school curriculum

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This article focuses on the experiences of beginner teachers of the transdisciplinary demands evident in school curricula. A detailed inductive thematic analysis of open-ended interviews with ten beginner teachers from socially diverse South African schools provided rich data on their experiences of these demands. Rapid changes in the South African school curriculum since 1994 are discussed against the backdrop of participants' real lived experience during their first three years of teaching and are posed as main reason for transdisciplinary demands on beginner teachers. Despite the socio-economic differences between schools, all participants experienced the same cognitive and emotional dissonance during their first years of teaching. All participants' related experiences of heightened levels of confusion, fear of failure to meet demands of school management teams, frustration of not being able to effectively teach subjects for which they had been trained and concern about the influence of their lack of knowledge in unfamiliar subjects on learners. Drawing on the concept of an 'ideal' transdisciplinary approach, this article explores the ways in which transdisciplinary demands within the transitional space of the state of the South African educational system compound challenges faced by beginner teachers. Recommendations for tertiary teacher training programmes are briefly suggested in the conclusion.

## Introduction

This article focuses on transdisciplinary demands encountered by beginner teachers during the first years of their teaching career. For the scope of this article, transdisciplinary work refers to a concentrated effort 'between disciplines that creates a movement across the disciplines and results in a product beyond all disciplines' (Nicolescu 2005:2-3). This article deals with the experiences of beginner teachers in South African classrooms, where the 'product beyond all disciplines' (Nicolescu 2005:2-3) is obscured because of various transitional socio-political changes in a short period which vastly affected the school curriculum. Education in South Africa has undergone several changes after the fall of apartheid<sup>1</sup> in 1994, which had a profound influence on beginner teachers' experiences during their early years of teaching. The beginner teachers involved in this study have received subject-specific tertiary training, and were appointed in positions according to their expertise, only to be asked to teach different subjects at the start of the academic year. All were committed to be successful teachers in their fields of expertise but felt that they were not in any position to refuse requests from school management teams to teach other subjects at this early stage of their careers. In some cases, the participants were asked to teach other subjects together with their expertise subjects, which compound the demands of preparation for subjects of which they knew little. It is these experiences brought about by a unique context with a transdisciplinary nature that contribute to the significance of this article.

The starting point of this article will be an overview of the nature of beginner teachers. Firstly, the concept of beginner teachers will be clarified and it will then be characterised. Challenges and difficulties appear when teachers start their teaching careers and these will briefly be discussed. The socio-political origins of these demands manifesting in South African classrooms will be provided. Then, 'transdisciplinary demands', as it stands in scholarly literature, will be clarified and conceptualised. Transdisciplinary demands for the scope of this article will also be discussed. The transdisciplinary framework set forth by Van der Westhuizen, Greuel and Beukes (2017) is discussed to show how transdisciplinary demands could be dealt with as opposed to the way it is actually dealt with in classrooms, thereby highlighting the experiences of beginner teachers. The next section deals with the research methodology and methodological decisions that were employed in this study. Then, presentation of the findings and a discussion of the ways in which beginner teachers experience these demands will follow.

1. Apartheid ('separateness') was a system of institutionalised racial segregation and discrimination that existed in South Africa from 1948 until the early 1990s.

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## Beginner teachers amidst changing curricula: A vulnerable group

The concept 'beginner teacher' has been debated by a number of scholars in the field (Feiman-Neser 2001; Fraser, Greenfield & Pancini 2016; Veenman 1984). Other terms such as 'beginning teachers' (Fraser, Greenfield & Pancini 2017; Veenman 1984), 'novice teachers' (Feiman-Neser 2001) and 'early career teachers' (Fraser et al. 2017) have been used interchangeably. These terms have in common that they mostly refer to educators who are new to the teaching profession, although scholars usually specify the exact amount of time in relation to the preferred terminology. For the scope of this article, the term 'beginner teachers' refers to participants of the article who have been teaching for 3 years or less.

Challenges faced by beginner teachers are neither novel nor confined to a specific context. International research indicates that beginner teachers struggle with the shift from student teacher to beginner teacher (Friedman 2000; Klusman, Richter & Lüdtkke 2016; Stokking et al. 2003; Veenman 1984). Researchers describe the challenge of learning to teach in a 'real' teaching environment by using various terms, such as 'transition shock' (Corcoran 1981), 'reality shock', 'the survival phase' (Huberman 1989:57) and 'shattered dreams' (Friedman 2000:182). One of the challenges described in the literature is the 'dilemma from the extensive range of duties' (Kumazawa 2013:50), where beginner teachers are expected to take on various other duties besides teaching. Other researchers have also studied workload and role ambiguity as stressors affecting beginner teachers (Betoret 2009; Dicke et al. 2014; Schwarzer & Hallum 2008). The well-being of beginner teachers has been under scrutiny in the light of the problematic nature of the transition from student teacher to beginner teacher, which manifests in different forms such as low levels of well-being (Evers, Tomic & Brouwers 2004; Friedman 2006).

Other researchers in the field (Billet & Somerville 2004; Day 2008) discuss the reality shock and contradictory emotions experienced by beginner teachers as they take on roles as school teachers. 'Praxis shock' is described by Kelchtermans and Ballet (2002:115) as the contrast between teachers' expectations and classroom realities; they confirmed that beginner teachers are overwhelmed by a multitude of new challenges during their early years of practice (Kelchtermans & Ballet 2002; Le Maistre & Pare 2010). In most of the cases, emotional discomfort arises because of the dissonance between personal idealistic expectations, perceptions and beliefs and classroom realities (Keys 2007; Parkison 2008). Challenges in South African teaching contexts included negative attitudes of family members and friends when choosing to teach as a profession, teaching in unsafe environments, language barriers, transitions between different kinds of schools (independent, public or township schools), academic struggles, victimisation because of racial differences and transdisciplinary demands of continuously changing curricula (Woest 2016).

Beginner teachers experience emotions of isolation; in many cases, they experience not only the lack of institutional support but they also have perceptions of hostility from management and more experienced colleagues (Flores & Day 2006). These negative experiences generate negative emotions in the transition process from student teacher to beginner teacher. In addition, beginner teachers are expected to control their classes, ensure that their learners obtain good results and take on numerous extra-curricular duties (Woest 2016). The reality is that once newly qualified teachers start teaching, they experience teaching 'from the other side' for the first time. They were probably exposed to 'real-life' teaching only during teaching practice or in-service programmes, which take place in artificial environments and only prepare student teachers to a limited extent for the real world of teaching. The case made in this article involves experiences of beginner teachers when they are requested to teach subjects outside their fields of expertise. Beginner teachers' experiences are explored when they are in a sense 'forced' to adopt a transdisciplinary teaching approach with no or very little training or the 'new' subject they are requested to teach.

## Socio-political origins of transdisciplinary demands in South African classrooms

The socio-political sphere surrounding participants of this article arises from the inimitable development of the national South African school curriculum after the demise of apartheid. The ages of participants (24–28 years of age) involved categorise them as part of the so-called born-free generation. According to the 2015 report of the South African Institute of Race Relations (IRR), the 'born-frees' are children and youths born in the post-apartheid era, after the handover of power by the National Party (NP) to the African National Congress (ANC) in 1994. However, this article has broadened this definition to include everyone born in or after 1990. This inclusion is significant in the sense that it accounts for aspects of the political environments in which the participants had grown up, which correspondingly came to the fore during interviews. Although most of the participants were too young to remember much about the apartheid system, the rippling effect of apartheid was revealed in their narratives and all were strongly influenced by the apartheid system on their parents or had experienced the effects thereof in the South African school system themselves. Although born-frees are largely free of the constraints of the apartheid regime and have political rights, they still face difficulties such as poor education and a high unemployment rate. The participants as born-frees also experienced several changes in the South African school curriculum. After the fall of the apartheid regime, several policy changes were implemented one after the other, all of which had affected the participants, who had been of school-going age at the time.

The changes which probably had the largest effect on the born-frees pertain to the introduction and implementation of several curricula in a relatively short period of time. To improve the general quality of education, Curriculum 2005 was introduced in 1997 and was associated with social

justice, human rights, equity and development, learner centeredness and learning facilitation (Booyse & Le Roux 2010:52). This amendment implied that there were no more different curricula for different races as with the earlier Bantu Education Act. In 2004, the Revised National Curriculum Statement (RNCS) was introduced, whose aim was strong conceptual knowledge and critical awareness of the social, moral, economic and ethical issues in South Africa. The implementation of the RNCS attempted to address skills shortages in South Africa and the disciplines Life Orientation and Mathematics and two languages became compulsory. Finally in 2012, a comprehensive Curriculum and Assessment Policy Statement (CAPS), an improved implementation of the RNCS, was introduced and implemented.

These changes in policy took place in less than approximately 15 years' time, a fact that made the working conditions of teachers employed during this time extremely difficult. Curriculum changes had far-reaching effects on teachers who had to implement changes daily and in 'real-life' circumstances. It was expected that educators 'link' disciplines to others, for example a specific theme should run across all disciplines. Other curriculum changes demanded that different skills in specific disciplines were included with which educators had little or no experience. Numerous teachers were asked to teach other disciplines than their fields of specialisation, according to schools' urgent and diverse needs. In many cases, the curriculum changes were implemented in such a way that there may have been as much as three different curricula simultaneously implemented in one school. Thus, several teachers had to adhere to the guidelines of, in some cases, up to three different curricula when teaching different grades. Even for experienced teachers, these changes implied increased workload and new challenges to stay abreast of the curriculum demands. More so, it had a significant influence on the experiences of the participants included in this article, as they were faced with change, transition and the inevitable uncertainty brought therewith, during their first years of teaching.

## Unique transdisciplinary demands in South African schools

Current research focuses on transdisciplinary matters at higher education institutions rather than at schools (Aneas 2015; Darbellay et al. 2008) or the implementation of technology as a transdisciplinary demand (Aneas 2015). According to Darbellay (2015), transdisciplinarity involves the complicated relations woven into a dialogue between the scientific disciplines such as technical sciences, life and natural sciences and social sciences. In addition, Jahn, Bergmann and Keil (2012) describe the aim of transdisciplinarity as a contribution to:

...both societal and scientific progress; integration is the cognitive operation of establishing a novel hitherto non-existent connection between the distinct epistemic, social-organizational, and communicative entities that make up the given problem context. (p. 2)

Teaching across disciplines is by no means an easy task and students must be specifically trained to teach between disciplines. The participants in this article faced situations where they initially were under the impression that they will teach subjects in which they received specialised training in the skills and theoretical knowledge of their subjects of choice. They did not receive training in any other subject fields or specific training to deal with a transdisciplinary curriculum. Bostan (2015) found that teachers lack a theoretical background on transdisciplinary curriculum, which supports the confusion experienced by these teachers. In addition, Buckler (2010) concluded that transdisciplinarity refers to the 'highest level of integration, that which proposes the unity of intellectual frameworks beyond the disciplinary perspectives'. According to a transdisciplinary approach, suggested by Van der Westhuizen et al. (2017:2), disciplines involved in a specific field 'work together and learn from each other' to assess and develop, in this case, the taught curriculum. A key component is that the voices of role players are considered in the implementation of principles such as participation, collaboration and cooperation (Van der Westhuizen et al. 2017). Neither of these building blocks of a successful approach to transdisciplinary teaching was set in place when participants were requested to teach other subjects, thus resulting in their typically negative experiences.

## Research context and methodology

Within a qualitative methodological paradigm (Creswell 2007), I maintained an interpretivist epistemological stance which allowed for true meaning to be discovered (Neuman 1997) and meaning-making of the worlds of individuals (Cohen, Manion & Morrison 2011). In this case, I tried to make sense of beginner teachers' lived experiences of transdisciplinary demands of school curricula during their first years as teachers. The research design comprised a multiple case study (Creswell 2007). I employed purposive sampling to include participants, which is regarded as a core characteristic of qualitative research (Cohen et al. 2011). I further used maximum variation sampling (Terre Blanche, Durheim & Painter 2006) to select participants who could provide a comprehensive variety of data from different schools. Five male and five female participants who were employed at urban, township<sup>2</sup> and independent<sup>3</sup> schools were selected to expand the various experiences. Schools where participants were employed varied from well-resourced, fee-paying schools to under-resourced, no or low-fee-paying schools and differed vastly in many aspects. Participants were only selected from Pretoria in Gauteng, the administrative capital city in the smallest but wealthiest of South African provinces.

The South African Department of Basic Education groups grades into two 'bands' called General Education and Training (GET), which includes grade 0 plus grades 1 to 9,

2. *Township school*: This term usually refers to schools in the often-underdeveloped urban living areas that, from the late 19th century until the end of Apartheid, were reserved for non-white residents.

3. An independent school is independent in its finances and governance; it is usually not dependent upon national or local government to finance its operations.

and Further Education and Training (FET), which includes grades 10–12. The GET is sectioned further into ‘phases’: the Foundation Phase (grade 0 plus grades 1 to 3), the Intermediate Phase (grades 4 to 6) and the Senior Phase (SP) (grades 7 to 9). All participants were trained to teach in the SP and FET phases. Data were collected by means of open-ended interviews (Cohen et al. 2011). The interview protocol consisted of three loosely structured questions based on their overall experiences as teachers who recently started their teaching careers. Follow-up interviews were conducted, as participants were eager to share their experiences. The total time spent per interview was estimated between 90 min and 2 hours. Interview data were transcribed by means of an inductive thematic analysis (Terre Blanche et al. 2006) and several themes were identified. The identity of participants was protected by the use of pseudonyms in the dissemination of findings. This article focuses on one such theme, namely, participants’ experiences of transdisciplinary demands of the curriculum encountered in the schools where they were employed.

## Presentation and discussion of main findings

In this section, I present the main tenets of participants’ experiences as they pertain to the transdisciplinary focus of this article. Findings are related to existing literature as discussed earlier as well as the ‘ideal’ transdisciplinary framework set forth by Van der Westhuizen et al. (2017). I divided the findings into two groups, the first dealing with the initial experiences at the beginning of the teaching career in real lived school environments as opposed to expectations formed during tertiary training and secondly, the experiences of ways in which transdisciplinary demands are dealt with in school contexts.

### Beginner teachers’ excitement turning into disillusionment

Although many challenges of being a beginner teacher were mentioned by all participants, one aspect stood apart: the distance between implied expectations and preparation during their tertiary careers and the disillusionment this caused when facing reality. The majority of participants related emotions of excitement, anticipation to teach and excel in their subjects of expertise and commitment to succeed as teachers at the start of their careers. Jantjies<sup>4</sup> remembered how he ‘was so excited during the December holidays to teach his subject’ that he had trouble sleeping. He specialised in English teaching and had prepared literary works, collected books and teaching materials prior to the start of his career. Three months into his teaching career, he was asked to take on additional Life Orientation classes, a field which he knew nothing about. He said he ‘felt out of his depth and was sure the kids could see it’. Msizwe’s experiences resonate with the findings of

4.No real names are used to protect the identity of participants.

Keys (2007) and Parkison (2008) who find that the discrepancy between personal idealistic expectations and classroom realities create dissonance and emotional discomfort for beginner teachers. Data gathered from all participants showed that it is common practice in schools for beginner teachers to be asked to fill positions in disciplines for which they are not trained. All participants were asked at some point to stand in and teach subjects for which they were not trained for short periods of time. Six of the ten participants were asked to teach Life Orientation permanently together with the subjects they were already teaching and were trained to teach.

Teaching the subject of Life Orientation was challenging for most of the participants. With the implementation of CAPS in 2012, as an improved implementation of the RNCS, came the reduction of disciplines taught at schools. The subject Life Orientation was divided into two parts consisting of Arts and Culture (henceforth AC) on one side and Physical Education (henceforth PE) on the other. This was especially problematic in township schools, as materials with which to teach these subdisciplines were not readily available. Policy writers did not seem to consider the fact that not all the schools have adequate human or physical resources or equipment to deal with disciplines like Life Orientation, especially as they were expected to teach all the disciplines umbrellaed by the subject called Life Orientation. Participants’ views confirmed this:

‘Classrooms at my school are not suitable to cater for the requirements of Life Skills as a subject. We do not have a school hall for art exhibitions and drama performances’. (Thabiseng)

‘No, learning takes place in a normal classroom environment which makes it difficult to do justice to the completion of practical work. We also lack classroom space as our classrooms are over-crowded with numbers between 50 and 60 in one classroom, therefore the practical part of Art & Culture can’t be taught in the classroom’. (Msizwe)

‘No, our school is old and under-resourced to teach Life Skills properly especially the Art & Culture aspect. We don’t have a school hall and just an open space representing sporting grounds’. (Jantjies)

Isabel explained that she was the only teacher teaching Life Orientation to all the grades in the secondary school at which she was employed. She majored in Music and PE on tertiary level and was not skilled enough or trained to teach the subdiscipline, AC. She confessed that she focused on the PE section of the work because she found the AC ‘too challenging and I didn’t know enough, so I wasn’t self-confident’. She said she did not have sufficient time or resources to engross herself in the AC section of the curriculum and ‘that put learners at a disadvantage’. All participants agreed that Life Orientation was viewed by school management as a subject ‘teachable’ by any trained educator, regardless of their fields of expertise. Thabiseng said ‘they did not know enough about the subject to know everything that’s required’. In all cases, either PE or AC suffered and participants admitted that academic standards dropped to make up for their lack of knowledge or skill in these disciplines. A practical implication

of teaching Life Orientation was that participants had to take learners out of the classrooms to assess the PE section of Life Orientation. They found this part exceptionally upsetting, as they should teach children about 'reading not running' around (Msizwe). When requested to teach Life Orientation, Isabel expressed her disappointment of not being able to focus solely on her subject of expertise. She said she wanted to 'leave this profession because it is just too different than what they are sketching at university'. She said the 'school expected her to teach too many subjects in one position' and that it was not what she had 'signed up for'. Isabel elaborated on her experiences by commenting on the range of other duties expected of beginner teachers. She remembers how time spent on extramural activities limited her time for preparation for her own subject and the extra preparation for a subject of which she knew little. Her experiences mirror earlier findings in literature: Kumazawa (2013:50) explicitly refers to the 'dilemma from the extensive range of duties'. Similarly, other authors found negative workload and role ambiguity contributing to anxiety experienced by beginner teachers (Betoret 2009; Dicke et al. 2014; Schwarzer & Hallum 2008).

While Thabiseng's narrative was overshadowed by the negativity she had experienced from senior teachers and school management teams, she shared the same general disillusionment as her counterparts. Lack of institutional support and hostility from management as stressors experienced by beginner teachers were similarly identified by Flores and Day (2006). In Thabiseng's case, idealistic expectations were created during her tertiary career but were not met in the reality of practice, especially about the teaching of large classes. Although she had been prepared for large classes in a theoretical way during tertiary studies, the fact that she had to handle large groups in a small space was overwhelming. The fact that she was also asked to teach a subject out of her field, compounded this issue. She felt that she was not 'prepared correctly or even at all' to deal with such circumstances and that she would rather leave her position before it 'kills my passion for children'. Thabiseng's experiences resonate with recent findings of challenges experienced by beginner teachers specifically in South African classrooms, such as the teaching of large classes (Woest 2016).

Similarly, Elsa commented on the problem of teaching of large classes, another aspect they considered as lacking in their tertiary preparation. Isabel described the independent school where she had been appointed as follows:

'They had pushed thirty-three learners into a classroom that was built to accommodate twenty. So, we're not just talking physical space issues, but also four grand a month for thirty-three kids in a class. Thirty-three to one'.

Once again, expectations created during her tertiary career were foregrounded. She said that lecturers tell students 'to try and get into a private school, because classes are smaller, and you get paid better'.

Jantjies was the participant who had experienced change most frequently during his early years of teaching. He had

taught at three different schools during his short career of 3 years and the effects of these changes in his teaching context came to the fore during the interview. Before he was appointed in a permanent position, he held different temporary positions, teaching a variety of disciplines depending on where the school needed him. Jantjies completed tertiary studies in the field of Mathematics. He related how he was approached by school management teams with an attitude of 'if you can teach Mathematics, you can teach anything else.' The most significant transdisciplinary demand in his career related to him teaching in a different medium of instruction than for what he was initially appointed. Jantjies shared how this made him feel 'stupid and not like myself' and that he was taken aback when he was asked to teach in his second language.

The fact that participants feel they could not deliver their best work was a point of tremendous frustration for all. Participants seemed charged to make a good impression on school management teams and fellow colleagues by delivering their best work to stay in their positions and be accepted into the school culture. They further shared feelings of helplessness and subjection, as they did not perceive themselves in a position to refuse any requests from school management teams. They recalled how they struggled to prioritise activities and demands and how they were confused as a result of having to teach 'my own, real subject and all this other stuff' (Isabel). It can be inferred that the learners as well as the subdisciplines itself suffered the most in lieu of this transdisciplinary curriculum. The learners being disadvantaged was one of the most serious and distressing concerns for all participants.

Participants' narratives were interwoven with not only tales of being requested to teach outside of their subject fields but also of stories about how what they were taught during tertiary training did not match the demands they faced as teachers. The idea of 'better' schools is created in the minds of student teachers without tertiary staff being close enough to the real situations in South African schools. As a result of the position of power tertiary staff hold, student teachers not only believe them but also build ideal pictures of how a teaching environment should be. Adding to the issue of creating unrealistic pictures of the 'real world' of teaching, participants' stories indicate a lack of deep preparation of student teachers for the variety of transdisciplinary demands they face in a school context.

## Beginner teachers' experiences of dealing with transdisciplinary demands

It is significant that discourses of disillusionment were shared by participants from vastly different historical backgrounds, different schools they were teaching at the time and the contexts of these schools. None of the participants were prepared to deal with the variety of transdisciplinary demands they encountered in practice. This article shows

that transdisciplinary demands expatiate further than only teaching different subjects than the specialisation of participants. Participants' narratives also showed that certain skills were emphasised during their tertiary preparation, without preparing students to transfer those skills should a situation dictate otherwise.

Msizwe relates how tertiary education prepared students to use multimedia in classrooms and foregrounds online teaching strategies, despite the fact that there was only limited access to such facilities in the township school where he had started teaching: 'At university we're taught about using multimedia in the classroom, but when you get to the school, they don't have a projector there. It's only one projector for the whole school, or it's not working'. Darbellay (2015) comments on this aspect by mentioning the complex relation plaited into an interchange between the scientific disciplines such as technical sciences, life and natural sciences, and social sciences. Participants lacked the cognitive skills to create a connection between the 'distinct epistemic, social-organizational, and communicative entities that make up the given problem context' (Jahn et al. 2012:5), which is evident in the narratives of participants.

At times, Msizwe had prepared lessons that required the use of multimedia and found that despite having made the necessary arrangements beforehand, the equipment needed was either not available or out of order. He related how he was so scared that he 'saw some ghosts because I wasn't really prepared by varsity for the school'. Tertiary institutions have been moving towards a hybrid approach of learning for more than two decades, including a blended variety of digital teaching strategies (Prensky 2001). Apart from the fact that many students struggle to stay abreast with these developments, owing to lack funds for Internet connectivity. (Woest 2016), it also has an influence on the expectations created in the minds of future teachers. Students are striving towards becoming technologically literate, and spend funds on technological equipment and extra training sessions only to be disheartened by the total lack of technological equipment when starting to teach in less-privileged schools. Isabel shared that even in a privileged school, there were often instances where she had to rely on what she called 'old teaching methods'.

The transdisciplinary framework Van der Westhuizen et al. (2017) suggest as an 'ideal' transdisciplinary framework in this article highlights the negative experiences of beginner teachers as a result of the lack of implementation of the principles of an aligned transdisciplinary approach. Participants expressed uncertainty, fear and anxiety of anticipated conflict with school management teams by using phrases such as 'not being sure of what I really should do, often got me into trouble' (Elsa), 'I was afraid of being in trouble all the time' (Jantjies) and 'I couldn't say no if the principal asked me to teach something although I couldn't do it' (Isabel). The transdisciplinary principle of 'work together and learn from each other' suggested by Van der

Westhuizen et al. (2017:2) was not evident in the real lived experiences of participants involved in this article. Participants faced hostility if they challenged school management about transdisciplinary demands (Thabiseng) and found themselves in vulnerable positions as opposed to management teams positions of power. Isabel related how she 'was asked so nicely by my Head of Department to teach Life Orientation, that I could not say no'. Jantjies and Msizwe also shared how they were approached in a very polite and friendly manner which left them too ashamed or feeling guilty to refuse. This data show that beginner teachers are indeed thrown into the deep end and end up stretching their abilities to a point where it is only the most resilient or desperate beginner teachers who do not leave the profession (Flores & Day 2006). All participants commented on how they wanted to make a good first impression and how they wanted to avoid people thinking 'I'm not willing to work' (Jantjies). These findings are in contrast to the transdisciplinary framework set forth by Van der Westhuizen et al. (2017), who emphasise transdisciplinary principles such as participation, collaboration and cooperation.

In the light of their experiences together with numerous other challenges shared by participants, beginner teachers may be viewed as a vulnerable group in the educational sector. Included in their narratives, all participants shared stories of how they were expected to coach certain sports and cultural activities as part of their extra-curricular duties and how they were under immense pressure to achieve results in these activities without any mentoring or training in. The transdisciplinary demands thus extend further beyond the academic curricula, adding additional cognitive and emotional stresses to beginner teachers.

## Conclusion

This article discussed the experiences of transdisciplinary demands of school curriculum of ten beginner teachers teaching in South African schools. Findings showed that beginner teachers are still faced with a myriad of challenges as shown by various other scholars over the past four decades (Fraser et al. 2017; Friedman 2000; Klusman et al. 2016; Stokking et al. 2003; Veenman 1984). This article added transdisciplinary demands as one more compounding stressor to the experiences of beginner teachers. The significance of the article lies in the unique South African schooling context, where continuous curriculum changes seem to have left a void in tertiary training, where student teachers should be prepared to fulfil a range of transdisciplinary duties. Data clearly showed overwhelming feelings of anxiety, fear of school management teams, disillusionment, frustration and waning enthusiasm about the profession. In any environment, engaging in responsibilities for which one is not specifically trained for is never easy, more so in an environment where the futures of young minds are at stake. However, at this point in the South African education system, it is the way it is. This is the reality with which beginner (and other) teachers are faced daily and must deal with together with many other challenges. Yet, the responsibility to alleviate the resulting tension and disillusionment lies with tertiary

institutions and their visions for teacher educator training. Training for teachers must necessarily engage with the aspect of transdisciplinary curricula and demands in diverse South African schools and should challenge the existing regimes of the perceived 'truth' around the situation in South African schools.

The way beginner teachers navigate themselves through transitory periods of change and the numerous challenges thereof should be considered when designing tertiary curricula. Furthermore, preparation of education students should be diverse in that it involves all possible contexts which students may encounter. Demographically, this article was limited to the Gauteng province in South Africa. It was thus placed in a specific context which did not include other South African provinces where more diversity may have been evident. Though the article focused on a relatively small sample, this article showed that all beginner teachers in this sample, despite vastly differing histories and backgrounds, struggled with the same emotions about transdisciplinary teaching in different contexts and had similar experiences. Participants were also representative of four South African races (black people, mixed race people, Indian people, white people). Although the research sample included racial diversity, it still implies that only two participants of each race participated in this article. Further research in this field may prove valuable in that generic findings may be applied to other contexts such as the other South African provinces with the unique context of each in mind.

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The author declares that she has no financial or personal relationships which may have inappropriately influenced her in writing this article.

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