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## “We can’t believe what we see”: Overcrowded classrooms through the eyes of student teachers

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The effects of overcrowded classrooms are far-reaching for teachers and learners. Many parents base their decision on whether to send their child to a particular school on the prospective number of learners in the child’s classroom (Mustafa, Mahmoud, Assaf, Al-Hamadi & Abdulhamid, 2014:178). All teacher training institutions ought to ascertain whether they offer appropriate teacher training programmes that will enable student teachers to deal with the numerous demands associated with the teaching profession, among others, teaching in overcrowded classrooms. The aim of the research reflected in this article was to explore student teachers’ challenges when teaching in overcrowded classrooms. An exploratory research design and qualitative research approach was chosen as the appropriate methodology for this project. Data was collected by means of a non-compulsory written assignment set out in student teachers’ teaching practice workbooks. The theoretical frameworks used constructivist learning theory and socio-constructivist learning theory. The research revealed that numerous problems were experienced by student teachers, who were teaching in overcrowded classrooms. Guiding principles regarding support from lecturers, significant observation and the responsible engagement of mentor teachers are suggested.

**Keywords:** Internships; Large classes; Mentor teachers; Overcrowded classrooms; Practicum; Pre-service teaching; Student teachers

### Introduction

The maximum recommended learner-educator ratio for South African primary schools is 40:1 and for secondary schools 35:1 (Motshekga, 2012). However, there are schools in South Africa that have far more learners in one classroom. In these schools with overcrowded classrooms, student teachers have to complete their teaching practice as required by training institutions. When it comes to education, and specifically when it comes to class size, more is the exact opposite of better (KEZI 9 News, 2012). In March 2013, a document entitled *Policy Brief* (Modisaotsile, 2012) requested better teacher training to address teaching challenges, one of which is overcrowded classrooms.

My personal investigations and observations when I visited and assessed student teachers undertaking their teaching practice at schools, convinced me that the challenge of overcrowded classrooms and the management thereof is still largely unaddressed in South African schools and teacher training institutions. John (2013) reports that in some schools in the Eastern Cape, learners are sitting three or four to a desk meant for two, thus obstructing traffic flow in the classroom and necessitating extraordinary tactics to move around. One school in the Eastern Cape has 1,300 learners but only 24 teachers. Another school has 165 learners in the Grade Three class and 140 learners in the Grade Two class (John, 2013). In 2011, one school had 150 Grade One learners crammed into one classroom. In the same school, the Grade Two class had 78 learners, the Grade Three class had 57 learners and the Grade Four class had 70 learners (Venktes, 2011:3). Thabo Sematie, provincial secretary of the South African Democratic Teachers Union, has reported that more than 15 schools in North West Province are overcrowded (SABC, 2013).

Overcrowded classrooms are unfortunately part of South African education, and will remain a part for the immediate future and perhaps even for the long-term future. All teacher training institutions should therefore offer appropriate teacher training programmes that will enable student teachers to deal with the critical problems of teaching in overcrowded classrooms. This has particular significance for teaching practice modules, since student teachers need to gain the skills and confidence required to teach large numbers of learners in one classroom. Large class sizes can be an overwhelming experience for newly appointed teachers if they lacked exposure to teaching in overcrowded classrooms during their training years (Opoku-Asare, Agbenatogbe & DeGraft-Johnson, 2014:123).

The following research question was formulated for the purpose at hand: *what problems do student teachers experience when teaching in overcrowded classrooms in the course of their practical training?* In order to answer this question the following two questions were posed to the participants: (1) what were the problems or challenges you experienced when teaching in overcrowded classrooms; and (2) what positive aspects did you experience when teaching in overcrowded classrooms?

Since student teachers’ involvement in teaching in overcrowded classrooms in South Africa has not been addressed in depth to date, the study is intended to raise awareness of its critical urgency and the need to determine the competencies and skills required by student teachers to teach in overcrowded classrooms. If this gap is not addressed, student teachers and teacher training institutions will remain unaware of the challenges

awaiting future teachers, who have to face and teach large numbers of learners in one class. One can assume that student teachers' professional training will be distinctly deficient in light of the endemic phenomenon of overcrowding. Professional skills and responsibilities are encouraged and developed by exposure to authentic learning experiences and cultivation of conscientious attention to matters of professional pedagogic concern and accountability, such as teaching in overcrowded classrooms. Therefore, the broad research aim was to determine the problems experienced by student teachers when teaching in overcrowded classrooms in order to determine the need for and nature of proper training in this regard.

#### Literature Review

Predominately overcrowded classrooms are a major problem in some schools in South Africa. In 2013, a memorandum from the organisation, Equal Education, was handed over at Parliament in Cape Town and at the Department of Basic Education in Pretoria in which overcrowded classrooms were criticised. According to the memorandum, "...it is impossible to learn and to teach when there are 130 learners in a class. We (teachers) have experienced this" (Davis, 2013).

#### *Teaching challenges in overcrowded classrooms*

Teaching in overcrowded classrooms creates an enormous challenge in producing productive learning classroom environments where effective teaching and assessment strategies are crucial. Teachers cannot practise a variety of methods, such as higher-order questioning and active learning approaches. In fact, teachers are effectively confined to the 'chalk and talk' instructional method (Opoku-Asare et al., 2014:128). This is widely practiced in South African schools. For example, some schools in the Eastern Cape have more than 130 learners squeezed into one classroom and teachers are obliged to present lessons with their backs pressed up against the blackboard (Guardian Africa Network, 2013).

The disruptive, counterproductive effect of overcrowding is explained as follows: "*Teachers don't have time to grade each paper. Instead they just check off whether the student completed the task and overlook whether they did not work the right way*" (KEZI 9 News, 2012). Such wrong ideas then remain in the learners' minds, and are in all probability never corrected. This could be one explanation for poor matriculation results. Furthermore, in overcrowded classrooms, teachers cannot pay attention to all the learners (Imtiaz, 2014:251) and are unable to differentiate their attention amongst learners. This is affirmed by Kiggundu and Nayimuli (2009:350) and Sosibo and Nomlomo (2014:89), who argue that teachers cannot

persuade or take all learners to task to participate and they tend to ignore those who are passive.

#### *Disciplinary problems in large classes*

Mustafa et al. (2014:178) point out that large numbers of learners in one classroom are an impediment to classroom management in general, and classroom discipline specifically. Larger classes are noisier and more prone to pushing, crowding and hitting, to the extent that this can impact negatively on classroom discipline. One teacher cannot cope with such situations in the classroom on his/her own. Teachers lose valuable lesson time in such circumstances, because they spend most of the lesson time trying to control the learners. Little time is left for real teaching (Imtiaz, 2014:251).

#### *The influence of large numbers on learner performance*

Chingos (2013) is convinced that students will learn more in smaller classes. There are more opportunities to receive individualised instruction from the classroom teacher, and therefore, parents prefer smaller classes. Parents believe that their children will perform much better in classes that do not have a large number of learners.

When comparing the achievements of large numbers of learners in classes with the achievements of small numbers of learners in classes, research conducted by Cortes, Moussa and Weinstein (2012:25) highlighted the fact that class size affects student performance, due to misbehaviour and other disciplinary problems in large classes. The learners in the small classes scored, in general, much higher marks than those in the large classes. According to these researchers, learners in smaller classes learnt more as they did not experience disruption during lessons. Participation in learning activities and group work in the smaller classes contributed towards the higher scores, and resulted in sound discipline, whereas in the larger classes, learners scored lower marks, and disruptive behaviour made it difficult for teachers to manage these classrooms. From their findings, it appeared as if learners in one classroom increased the incidences of disruptive behaviour. If one or more students behave badly, the learning activities of all the learners in the class is influenced.

#### *Time management*

Teaching in overcrowded classrooms takes a toll on the teacher's ability to manage time. According to Imtiaz (2014:251) and Mustafa et al. (2014:178), teachers who teach in overcrowded classrooms devote less time to instruction and integrated reading and writing tasks, because instruction time is often wasted by administrative tasks, such as checking attendance lists, and managing behaviour, thus leaving less time for actual instruction.

Consequently, teachers are required to work more hours outside the classroom, in order to assess more classroom and homework assignments as well as tests and examination scripts.

Overcrowded classrooms clearly have a negative impact on teachers and, of course, also on learners. In the next section, the impact of overcrowded classrooms on learners is discussed.

#### *The impact of overcrowded classrooms on learners*

Overcrowding has a variety of disruptive consequences for learner behaviour. For example, learners cannot pay attention or participate at the required level of intensity because classmates are noisy and restive (Benbow, Mizrahi, Oliver & Said-Moshiro, 2007; Mustafa et al., 2014:78; Qasim & Arif, 2014:145), with the result that academic achievement is negatively affected (Bayat, Louw & Rena, 2014:49). Furthermore, learners cannot rely on individual care from teachers (Mustafa et al., 2014:178), particularly in instances where learners need extra support.

The learning environment ought to support learners' motivation to participate in group or individual learning activities. When learners are placed in classes with small numbers, they are more involved and academic achievement increases. This is supported by Ikediaskhi and Amaechi (2012:160), who point out that lower teacher-learner ratios result in higher-quality education. These authors came to this conclusion after research conducted in Nigerian primary schools. In overcrowded classrooms less attention can be given to individual learners and it is difficult to motivate them. Overcrowded classrooms tend to be teacher-centred: teachers react and learning is passive, with the result that learners may lose motivation.

Imtiaz (2014:251) as well as Khumalo and Mji (2014) agree that overcrowded classrooms are unsupportive learning environments, and may even affect the learners' physical health. They point out that overcrowded classrooms are unhygienic, because if one learner has a contagious infection, then others can be easily infected. Furthermore, when learners write tests, they need space between them, and if they do not have enough space, they may be able to copy information from one another. Thus, learners may move to higher grades without the necessary foundation that must be laid in each lower grade. Ultimately this catches up with these learners in Grade 12. This is also a possible explanation for poor matriculation results in overcrowded classrooms. Bayat et al. (2014:53) suggest that the Department of Basic Education should decrease the teacher to learner ratio to 1 to 25 for the benefit of both the teacher and the learner.

#### *Overcrowded classrooms in other countries*

Teaching in overcrowded classrooms is a global challenge. Kobaissi, a teacher who teaches Ad-

vanced Placement Psychology in a school in Tennessee, says, "when you have a class size that's even 40, it's too large. You can never really get to teach students and find out their needs and weaknesses" (Ellis, Limjoco & Johnson, 2011).

Research reveals that a major source of stress and burnout among teachers in Zimbabwe (Mapfumo, Mukwidzwa & Chireshe, 2014:191) and in Ghana (Opoku-Asare et al., 2014:123) are classrooms that are severely overcrowded. Since 2004 overcrowding in classrooms in Nigeria has become the order of the day, which is not conducive for effective teaching and learning, and where a sound teacher/learner relationship has become impossible (Boyi, 2014:69). A similar study done by Gideon (2014) discloses class sizes to be extremely high in most schools in Kenya, where classes with learner numbers ranging up to 200 can occur, and are likely to undermine effective teaching and learning. Furthermore, research conducted by Drame and Kamphoff (2014) revealed that the average class sizes in Senegal are between 50-60 learners per classroom, where learners are cramped together, which make classrooms inaccessible for those learners with orthopaedic disabilities. Additionally, overcrowded classrooms are also problematic for learners with attention or behavioural difficulties, as well as vision and hearing impairments.

Thus, from the previous research discussed above, it is clear that the overcrowded classroom has an impact on both the teacher and the learner.

#### *Theoretical Frameworks*

The theoretical frameworks applied in this study are based on the constructivist learning theory and the socio-constructivist learning theory postulated by the developmental psychologists and philosophers Jean Piaget (1896-1980) and Lev Vygotsky (1896-1834).

According to constructivism, learning is a dynamic and active process of constructing meaning and transforming self-constructed understanding in interaction with the environment (Grabinger & Dunlap, 1995:9). The constructivist learning theory emphasises inter alia the following four principles, which are also imbedded in the socio-constructivist learning theory, namely that: (1) knowledge is constructed, rather than innate or passively absorbed; (2) knowledge is socially invented, not discovered; (3) learning is essentially a process of making sense of the world and real-life situations; and (4) effective learning requires meaningful, open-ended challenging problems for the learner to solve (Fox, 2001:24). Gergen (1997:27) explains that constructivism is essentially based on the belief that the learner takes an active role in his/her learning, proceeding from exposure to the reception and internalising of subject matter, which means integrating new material with the existing store of knowledge. This approach is

conducive to student-centred teaching and learning (i.e., foregrounding the student teacher's own efforts to understand) (Woolfolk, 2010:311-312). Constructivists believe that instead of confronting learners (in this case, student teachers) with simplified (schematic) problems and basic skills drills, they ought rather to deal with complex real-life situations, as exemplified in teaching in overcrowded classrooms.

The socio-constructivist learning theory is a variant of the constructivist learning theory (Edu-tech Wiki, 2009:1-2). Socio-constructivism focuses on the effect of partnership and negotiation on reasoning and learning. Learners learn from experts and from their peers. In this research, the learners are the student teachers, and the experts are the lecturers and mentor teachers. Learning from experts is called assisted learning support, which helps learners (student teachers) by scaffolding learning experiences. Through assisted learning support, learners (in this case, student teachers) can achieve performances beyond the level individuals might achieve on their own (Schulze, 2009:993).

The constructivist and socio-constructivist learning theories applied to this research mean: (1) that student teachers construct their own knowledge and develop their own skills with regard to teaching in overcrowded classrooms; and (2) that social interaction of student teachers with other student teachers and with their mentor teachers is an important aid to their knowledge construction (Bruning, Schraw, Norby & Ronning, 2004:195).

The principle of social interaction means that student teachers must engage with one another as well as with their mentor teachers and lecturers, as they interpret their experiences regarding teaching in overcrowded classrooms. Socio-constructivist learning does not aim at individuals learning by themselves. Instead, it recommends learning activities experienced in a group, which are meanwhile internalised individually. Such activities should address learners' behaviour as a group, and therefore, the outcomes ought to be generated by the group as a whole. As student teachers work collaboratively with mentor teachers and other student teachers during their teaching practice sessions, each student teacher constructs his/her own knowledge, and develops his/her own skills and competencies to teach in overcrowded classrooms.

The principles of the constructivist and socio-constructivist learning theories discussed above are clearly interwoven with one another, and they provide a valuable foundation for this research. Both learning theories focus on the active role of the learner (in this case, the student teacher) in building understanding and making sense of information in a social context (in this case, the school amongst lecturers, fellow student teachers and mentor teachers).

Against this background, obtained from the literature review and the theoretical frameworks, the research methodology is explained in the ensuing section.

### **Methodology**

I employed an exploratory research design to understand the challenges facing student teachers who are undergoing training to become Foundation Phase teachers. I wanted to understand fourth-year student teachers' problems when teaching in overcrowded classrooms, in order to determine what is needed to train future student teachers to teach in overcrowded classrooms. Marshall and Rossman (2006:2) point out that qualitative research examines the complexity of social relationships expressed in daily life and the significance that participants attribute to these interactions. This research approach is also grounded in socio-constructivism, as discussed in the previous section. In the research under review, as noted, the relational concerns are centred on problems experienced by student teachers when confronted by large classroom populations during their teaching practice sessions at schools.

### **Sample**

Purposeful sampling was used to select 112 information-rich assignments received from final-year (i.e. fourth year) students registered for the Bachelor of Education (BEd) degree (with specialisation in the Foundation Phase), which is the field in which I teach. These students were all registered at a higher education institution. The BEd degree requires four annual stints of teaching practice at schools. The reason for enlisting fourth-year students as participants in the research was that their experiences in the three previous teaching practice modules provided them with valuable practical teaching experience. For this reason, their judgement was likely to be more mature than that of students not yet in their final year. A prerequisite for the sampling was that the student teachers had to be teaching in schools with more than 50 learners in one classroom. The number of learners in a classroom in the schools where the participants conducted their teaching practice ranged from 50 to 80. Maximum variation sampling was used. Participation included both genders and a wide age distribution (20 to 39 years). Moreover, these students had completed their practice at schools in widely differing social areas. The schools' locations ranged from those in affluent areas and rich in human and material resources to schools in poverty-stricken areas that were deficient in human and material resources. Participants also represented a variety of cultural groups.

Data was necessarily limited by the very nature of the assignment, which made it non-compulsory. Asking for people's views and opini-

ons can never be compulsory. A further limitation is the possibility that some students may still have felt obligated to participate and/or may be saying what they think I would want to hear. This limitation is a possibility that can unfortunately not be eliminated. Another limitation is the possibility that a relatively small number of students may participate as the completion of the questionnaire is not compulsory.

Data was also limited by using only one form of data collection, namely a structured questionnaire. In other words, this delimited the findings to exclude probes into students' experiences in a way that might arrive at more nuanced experiences. Such probes require individual and/or focus group interviews which were not viable for the following reason. The questionnaire was sent to all students who enrolled for the fourth year teaching practice module. These students teach in schools that are spread throughout South Africa. Therefore, interviews would necessarily be limited to students within viable reach, but the experiences and views of these students would not necessarily be representative.

Ethical considerations were adhered to, and my teacher training institution approved this research project. Student consent was implied by his/her participation in completing and returning the questionnaire. In a covering letter to the students, the purpose of the research, the participants' role in the research and withdrawal without penalty were explained. It was clearly explained to the students that they did not constitute a captive audience, but that their participation was purely voluntary. The researcher's contact details were also provided. Anonymity was addressed by informing the participants that their names, those of their mentor teachers, and those of the schools where their practice sessions were undertaken, should not be indicated on the assignment. The student teachers were required to cut this assignment from their assignment workbook, and post it anonymously to the researcher. All these ethical considerations were explained in the covering letter.

#### Data Collection

Data collection was done by means of a non-compulsory written assignment, set out in the workbooks that had to be completed by student teachers during their teaching practice periods. The assignment consisted of the following two questions: (1) what were the problems or challenges you experienced when teaching in overcrowded classrooms; and (2) what positive aspects did you experience when teaching in overcrowded classrooms? Thus, the assignment required the student teachers to give a written account of his/her experiences of teaching in overcrowded classrooms during teaching practice sessions. Several of these

non-compulsory assignments, which lacked a substantial factual account, were excluded. The final sample consisted of 112 assignments.

#### Data Analysis

Content analysis was done by organising, analysing and interpreting the data in four stages: (1) identifying keywords such as 'challenges', 'problems', 'noise', 'disruption' and 'tests'; (2) categorising responses according to keywords, such as 'poor discipline' and 'academic achievement'; (3) consolidating categories into subthemes such as 'Learners' lack of motivation'; and (4) organising subthemes under a main theme, such as 'the influence of overcrowded classrooms on academic achievement'. The analysed data is presented, and then discussed and interpreted with reference to the literature review and theoretical frameworks.

#### Findings and Discussion

The findings are presented with reference to the voices of the participants, which are discussed and interpreted and linked with the literature, as well as the theoretical frameworks. The qualitative data collected for this research were used to organise and interpret the findings. When reaching saturation of the data, the findings were organised into two themes, namely: (1) influence of overcrowded classrooms on managing discipline; and (2) influence of overcrowded classrooms on academic achievement. Three sub-themes were identified under the second theme, namely 'no individual learner support' and 'no proper assessment', 'learners' lack of motivation' and 'no variety of teaching strategies'.

##### Influence of Overcrowded Classrooms on Managing Discipline

The first theme that arose from the data was student teachers' reflections on the influence of overcrowded classrooms on discipline. All 112 participants confirmed that overcrowded classrooms had a negative influence on managing discipline. All the participants experienced classrooms where large numbers of learners were cramped together in one classroom. The learners were found to scream, fight and bully other learners and vandalise resources. One of the participants revealed that she could not believe her eyes when one of the learners could be found to be sleeping in a very noisy classroom. Another participant explained that teaching in an overcrowded classroom was stressful, because she had to spend time to get the learners to settle down and to address misconduct between learners. One of the participants who taught in an inner city school said that she was irritated because she was unable to get learners' attention, as they thought education was a joke. This participant admitted that learners "...laugh at teachers who want to discipline them". Another

participant attested that learners felt bored when the teacher could not control the class. Then they started to play or fight, and "...this leads to chaos". The same participant pointed out that learners did not respect teachers or other learners who wanted to be educated. According to this participant, learners "...love destruction in the classroom..." and she is no longer sure if she wants to become a teacher. Another participant expressed her concern that "...it becomes dangerous to teaching [sic] in an overcrowded classroom because rules have no effect". Participants testified that teaching time was wasted on attempts to discipline the learners and that they were stressed and frustrated when teaching in overcrowded classrooms. Nine of the participants said that they could not complete the lessons in the time allowed, because there were too many interruptions. From the findings it is clear that the overcrowded classrooms tended to be chaotic and unmanageable. Misconduct reduced the efficiency of lesson delivery. Addressing behavioural problems cut deeply into teaching and learning. The participants experienced the feelings expressed by KEZI 9 News (2012) and Mapfumo et al. (2014:191). Another participant said that learners who wanted to ask questions were ridiculed and heckled in what seemed to be a 'dumb like me' campaign. Undisciplined learners tended to distract other learners who wanted to work. These observations are borne out by Intiaz (2014:251) and Modisaotsile (2012) as well as by Mustafa et al. (2014:178), who highlighted disciplinary problems in classrooms as a serious challenge for teachers. The challenge experienced by student teachers in managing discipline in South African schools echoed the description by Kiggundu and Nayimuli (2009:350), who argue that overcrowded classrooms in South Africa are noisy and learners are not actively involved in classroom learning events. It is impossible for those learners who want to pay attention to do so.

From the above participant remarks, it is abundantly clear that fourth-year student teachers are discouraged, disappointed and disheartened and not capable of teaching in overcrowded classrooms once they enter the teaching profession. They are irritated and upset, and they need training in order to equip them with skills and knowledge to address the ample challenges of overcrowded classrooms.

In terms of the socio-constructivist theory of learning, instead of confronting student teachers with simplified (schematic) problems and basic skills drills, they ought rather to be required to deal with complex real-life situations. Managing discipline in overcrowded classrooms is a complex real-life situation and student teachers must be led and guided in order to construct their own knowledge of the skills required to deal with the challenges of overcrowded classrooms. Support through social interaction between student teachers, lecturers,

mentor teachers and fellow student teachers is a prerequisite to such knowledge construction. Student teachers need to be confronted with meaningful, open-ended, and challenging problems. Teaching in overcrowded classrooms is one such challenge. Student teachers need to address challenges and problems in overcrowded classrooms through learning in social context from lecturers, mentor teachers and fellow student teachers, in other words, through assisted learning support, which would help them to scaffold authentic learning experiences. This should enable them to perform beyond the level that they as individuals might achieve on their own (Schulze, 2009:993).

#### The Influence of Overcrowded Classrooms on Academic Achievement

The second theme that arose from the findings was the influence of overcrowded classrooms on academic achievement, which was covered in the second question. In this regard, no participant reported a positive experience, and the following three subthemes were identified when content analysis was done, namely: (1) no individual learner support and no proper assessment; (2) learners' lack of motivation; and (3) no variety of teaching strategies.

##### *No individual learner support and no proper assessment*

A common remark from participants was that they could not support individual learners, due to the large number of learners in one classroom. One participant revealed that she could not support the learners at all. There was not enough time for proper feedback to learners in general, and individual support was out of the question. This participant said that "...it was impossible to get to the back of the classroom to observe and assess activities done in the class and to do shoulder-marking". Another participant said that not all the learners were on the same developmental level, and therefore, that it was difficult for her to observe and identify individual learners who needed extra support in order to master the learning content. Another participant pointed out that in overcrowded classrooms, learners ignored homework, because they knew the teacher did not have time to check. This resulted in poor academic achievement. Another participant argued that even gifted children need individual support, which is not possible in overcrowded classrooms.

From the participants' views it seems that no individual support could be given or proper assessment could be done by them when teaching in overcrowded classrooms. Even gifted learners were affected by disruptive classroom conditions, to the extent that their academic achievement was reduced to a level that was sometimes below average. Learners who found it hard to keep up were

even more disadvantaged under such conditions. It also became clear from this research that another concern was that the student teachers were unable to provide comprehensive feedback to learners due to the large numbers. This is a concern, especially with regard to those learners who need special attention. It was difficult for the student teachers to move around. This may result in late discovery of those learners who were left behind. Since there can be little effective monitoring and assessing of individual learning, learners tend to become passive and lazy.

Findings of Benbow et al. (2007) and KEZI 9 News (2012) affirm the fact that no individual learner support and no proper assessment can be given in overcrowded classrooms because there is no time. Teachers struggle to explain and teach the learning content and learners cannot focus due to noise, disruptive behaviour, and lack of space and resources. Individualised support is out of the question. Benbow et al. (2007) confirm this finding, and state that teachers in overcrowded classrooms face enormous challenges in providing and managing productive learning classroom environments, where individual support and effective assessment strategies are crucial (Benbow et al., 2007).

According to the principles of the constructivist learning theory and the socio-constructivist learning theory, learning is embedded in a process of making sense of real to life situations (Fox, 2001:24). The responses of the participants who were in the real to life situation of an overcrowded class show that, during their training, student teachers need to be mentored, supported and helped in order for them to construct and develop the necessary knowledge and skills that might enable them to give a measure of individual support and proper assessment in overcrowded classrooms.

#### *Learners' lack of motivation*

Participants all maintained that the learners in an overcrowded classroom do not participate in learning activities due to lack of motivation. One participant indicated that "...learners feel tired and not motivated to participate as it is very hot and noisy in overcrowded classrooms". According to this participant, learners are not motivated to study, noting that "...they rely on cheating because they know that I cannot control them". Another participant disclosed that she did not have the time or ability to motivate individual learners with low test scores. Another participant cited disruptive behaviour and lack of resources in the classroom as reasons for learners' lack of motivation and inability to focus on learning activities. One of the participants declared that the learners in her class were unmotivated, because they did not have chairs to sit on and many learners had to share one desk.

The above sample of responses from the participants reveals the lack of learner motivation to be of critical concern in overcrowded classrooms. Lack of learner motivation can by its very nature be regarded as a significant causative factor in the lower pass rates and dropping academic standards found in overcrowded schools. The findings also show that student teachers could not determine whether all learners were participating, and coping with the learning content. Overcrowding left little room for opportunities to motivate learners to achieve their individual level of excellence.

Ikediaskhi and Amaechi (2012:160) highlight the fact that the reality of overcrowded classrooms results in learners' lack of motivation to participate in group or individual learning activities. In classrooms with small numbers, it is easier for teachers to motivate learners and ensure each learner's involvement in academic activities. From the participants' responses, one can assume that they do not know how to motivate learners in overcrowded classrooms.

As stated in the second section of this study, the fourth principle of the constructivist learning theory highlights that effective learning requires meaningful, open-ended challenging problems for learners to solve (Fox, 2001:24). Learners' lack of motivation in overcrowded classrooms was a challenging problem that the participants experienced. Their responses show that during the training years the mentoring that student teachers receive must enable them to construct knowledge and strategies of how to motivate learners in overcrowded classrooms.

#### *No variety of teaching strategies*

From the participants' responses, it was clear that teaching in overcrowded classrooms does not allow for a variety of teaching strategies. According to one of the participants, "...most of the activities planned for overcrowded classroom teaching do not encourage active participation. As a result, learners' thinking is not provoked effectively and they cannot apply knowledge." Another participant concluded that "...group activities are a 'no-no' [sic]". A few other participants supported this conclusion. One of them made the following remark: "I have tried different methods and styles of teaching so that all the learners can grasp the concepts. However I will never again. In large classes you are talking to the walls." One participant tried to use question-and-answer method but according to her "...the learners did not even bother to answer. They kept on playing and fighting while I tried to present my lesson." Furthermore, participants complained about the fact that there was not enough time and space to accommodate different learning strategies and different learning styles.

From the participants' responses, one can conclude that due to overcrowding, learner-centred activities which promote active participation are hindered and skills like critical thinking, creativity and problem-solving are compromised. A variety of interactive involvement strategies in the learning process is almost impossible.

Opoku-Asare et al. (2014:128) agree that in overcrowded classrooms, a variety of teaching methods cannot be practiced. Teachers are confined to the 'chalk and talk' instructional method.

One of the main ideas of socio-constructivist learning theory is that social interaction is an important aid to knowledge construction (Bruning et al., 2004:195). Teacher training happens in a social environment, where student teachers are surrounded by knowledge from tutorial matter and input from lecturers, mentor teachers and peers. Acquiring knowledge and skills regarding classroom teaching strategies is one of the main training outcomes during the training years. However, according to the participants' responses, it does not seem as if they can apply this knowledge in an overcrowded classroom. In this regard, the question teacher training institutes should ask themselves is: what kind of overall teaching strategies need to be mastered during the training years in order to teach in overcrowded classrooms? The answer may be found in socio-constructivist learning theory, namely, that all the role players form a social forum in which they can engage with one another, and where ideas can be shared and strategies can be tested.

### Conclusion

This research was undertaken to determine student teachers' perceptions of the challenges and problems they are required to face when teaching in overcrowded classrooms. The study identified various aspects that were organised under two inter-related themes that arose from the content analysis of the data. These are: (1) the influence of overcrowded classrooms on managing discipline, and (2) the influence of overcrowded classrooms on academic achievement. These two themes are by their very nature intertwined. The various problems in overcrowded classrooms related to these two themes were experienced by the participants to be disruptive behaviour (such as screaming, fighting, chaos and destruction in the classroom), vandalising resources, bullying, not paying attention, not participating in activities, no respect for student teachers, unmotivated and indolent learners, and no time for proper lesson presentation and classroom assessment due to unmanageable learners. It is important to identify and address these challenges and student teachers need to be equipped with skills and knowledge to cope with these complex real-life challenges that they experience when teaching in overcrowded

classrooms. In terms of the constructivist and socio-constructivist learning theories, one way of addressing the challenges and concerns identified in this study is by including problem-solving learning in the training of student teachers. Problem-solving learning relates to making sense of real-life problematic situations, and is therefore an active process that involves the invention and construction of knowledge in a social context. In regard to the management of teaching and learning in overcrowded classrooms, teacher training institutions must find ways to include learning that involves socio-constructivist problem-solving so that students themselves construct knowledge, skills and teaching strategies that will help them to teach effectively in overcrowded classrooms. Therefore, it is imperative that research be conducted into teaching methods that have proved to be successful in overcrowded classrooms.

### Recommendations

On reviewing participating student teachers' responses, it seems that incorporating the principles of constructivism and socio-constructivism into practical teaching modules throughout the entire training course, ranging from the first to the fourth and final year, could be a useful aid to inducing the competencies required to effectively deal with overcrowded classroom situations.

It is important to maintain conversations and collaborative initiatives concerning challenges that confront student teachers in practical situations, in particular when they have to teach in overcrowded classrooms. Student teachers need to maintain conversation and collaborate with their mentor teachers, lecturers and other student teachers in order to guide and help each student to construct the knowledge and the skills that will help them to teach more effectively in overcrowded classrooms. Student teachers should be given many opportunities for constructing knowledge through social interaction. Interaction with texts means interaction with facts, beliefs, ideas, opinions, impressions and reflections, and during such interaction students not only construct their own learning, but also learn to assess their own learning, thus promoting an in-depth learning approach.

Small-group collaboration and class discussions between various mentor teachers and student teachers from different settings is another helpful and valuable activity for the type of social interaction that promote the finding of answers and solving problems together. Technology should be utilised. Social networks such as a facebook page that is accessible to student teachers from other universities and colleges can be opened. Twitter and Instagram provide ample opportunities for discussion in order to address the challenges.

Student teachers need much support from their lecturers, mentor teachers and other student



teachers. Guiding principles can and should be gleaned from mentor teachers. Student teachers should carefully observe their mentor teachers' methods and teaching strategies. Furthermore, via social forums, as suggested in the previous paragraph, challenging situations can and should be subjected to critical analysis.

A sound relationship between the mentor teacher and the student teacher is crucial, especially when teaching in overcrowded classrooms. This relationship must be fostered by both in order for a student teacher to gain self-confidence and self-assurance – characteristics that are imperative for professional development.

The foundation of professional consciousness, professional responsibilities and professional conduct is laid during the training years. Student teachers need to acquire the necessary skills and knowledge to address the challenges of teaching, and in South Africa they must learn to confront with confidence the challenge of teaching in overcrowded classrooms.

The research under review merely touched on the importance of gaining skills required to teach in overcrowded classrooms and the support student teachers need to that end. Based on these findings, I assert that further research is needed in this regard.

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