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THE ATTITUDE OF TEACHERS TOWARDS THE PRACTICE OF STREAMING



UNIVERSITY OF THE
WITWATERSRAND,
JOHANNESBURG

JOSEPHINE VUYELWA WALUGEMBE

A research report submitted to the Wits School of Education, Faculty of Humanities, University of Witwatersrand, in partial fulfilment of the requirements for the degree of Master of Education by combination of coursework and research.

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ABSTRACT

Differentiation, as a strategy within inclusive education, seeks to respond to the challenges and opportunities of diversity within classrooms. This is done by adapting and modifying the methods of instruction, curriculum and activities to address effectively the needs and the potential of diverse learners. In the light of this, many teachers believe streaming is a form of differentiation, and a way to respond to the diversity faced in the classroom. To investigate this situation, this study explored the extent to which the attitudes of teachers sustained the practice of streaming in secondary schools. It also assessed whether the practice of streaming was congruent with the principles of inclusive education. Streaming is the practice of separating learners based on their respective cognitive abilities and their placement in similar ability groups. By using a qualitative research approach, this study found that teachers believed that streaming enabled differentiation and effective classroom management strategies. The various attitudes of teachers showed that they assumed streaming helped to deal with the distinguishable differences in learners' ability, their conduct and their perceived ability to cope with the curriculum demands. However, there was a misalignment between how streaming was practised and the principles of inclusive education. A fundamental issue was that those learners who were placed in the lower-ability groups were labelled negatively, and there was no differentiation that occurred within similar ability classes. In effect, streaming became a self-fulfilling prophecy for those in the lower-ability groups.

KEYWORDS:

Streaming; Inclusive Education; Attitudes; Diversity; Differentiation.

DECLARATION

I declare that this research report is my own unaided work. It is being submitted for the degree of the Master of Education at the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination at any other University.

_____

JOSEPHINE VUYELWA WALUGEMBE

6th day of June in the year 2018

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CHAPTER ONE: INTRODUCTION

1.1 Background

The introduction of the first South African policy on inclusive education aimed to provide a framework for an "inclusive education and training system" (Department of Education [DoE], 2001, p. 5). This is similar to international conventions, such as, the Salamanca Statement (UNESCO, 1994a), but the South African White Paper 6, also aims to not only 'integrate' learners with barriers to learning into mainstream schools, but also to restructure "attitudes, behaviour, teaching methods, curricula and environment" (DoE, 2001, p. 7) to accommodate learners' needs. With regards to the South African inclusive education policy, Peters (2007) contends that this framework developed from focusing on learners with "special needs" and also challenged all exclusionary policies and practices in education by creating schools that embrace the diversity of all children. Thus, the inclusive education movement has made robust progress from international conventions, to the development of local policies, as well as a growing literature on inclusive education. However, "many teachers still feel that the research does not fully address their professional concerns about how to enact a policy of inclusion in their classrooms" (Black-Hawkins & Florian, 2012, p. 567). This view is supported by Darling-Hammond and Snyder (2000, p. 523), who state: "As schools include a greater range of students from different backgrounds and with different approaches to learning, formulas for teaching that do not take account of students' experiences and needs are less and less successful".

Tomlinson (2005) stated that conventional teaching methods do not effectively consider the diversity of learners' needs. She further expresses the view that many classrooms reflect the diversity of the countries we live in, and that our teaching needs to accommodate this multiplicity. Unfortunately, according to Tomlinson (2005), these diverse learners are often met with teachers who teach all learners in the same way irrespective of the differences between the learners. Furthermore, teachers seem to be unaware of what a classroom might look like in reality where the needs of diverse learners are met.

One of the ways in which schools attempt to take differences between learners into account is described in the following ways as 'tracking' in the United States of America (USA) as 'setting' in the United Kingdom (UK); and, as 'streaming' in South Africa. According to Gamoran (1992), 'streaming' is defined as the separating of learners in certain subjects according to their "measured or perceived performance in school" (p. 11). Furthermore, the separation is ordinarily based on "students' prior learning" (William, 2008, p. 1) and this is usually a long-term arrangement for instance throughout the learners' high school career. Although not much South African research has been undertaken on this topic, international research indicates the following drawbacks of streaming: the negative impact on the self-esteem of the learner and streaming becomes a "self-fulling prophecy" (Clarke, 2003); lower-grouping classes spend more time on lower-order-thinking activities and behavioural issues than the higher-grouping classes; it rarely adds to the overall achievement of schools (Gamoran, 1992); it accentuates the inequality gap between learners (Gamoran, 2009); and, it increases the marginalisation of those learners in the lower-grouping classes (William, 2008).

1.2 Problem statement

The challenge of inclusive education is that despite the remarkable development in the areas of policy and theory, both international and local studies indicate that there are significant gaps with regards to the practical implementation of this policy in the classroom. In terms of international research, many teachers believe that they are not adequately equipped with the necessary qualification to teach learners with diverse needs, and this constitutes a hindrance to the implementation of inclusive practices (Florian & Linklater, 2010). Furthermore, many teachers express reservations that the research undertaken does not comprehensively address how to implement these principles of inclusivity in a practical manner in the classroom (Black-Hawkins & Florian, 2012).

This issue of being ill-equipped to deal with diverse learning needs is particularly prevalent in South Africa due to the great diversity of its learners in terms of socio-economic, racial, cultural, religious, mental and physical ability and needs. South African research illustrates that teachers do not apply teaching strategies that respond to learner diversity for a variety of reasons: the ambiguity of policies and lack of educational support (Donohue & Bornman, 2014); the lack of adequate training (de Jager, 2013); and, the unwillingness to explore more

inclusive pedagogies (Meltz, Herman & Pillay, 2014). Certain practices are adopted by teachers, which is based on their belief that these are best suited to enable effective learning. The focus of this study is to investigate the practice of streaming, which has been adopted in various schools in South Africa, despite the drawbacks for learners, which research has demonstrated. International studies show that 85% of research indicates the disadvantages of streaming learners, although the same percentage of schools continue to practise it (William, 2008). Further, many schools in South Africa continue to implement streaming in secondary school classrooms even though this practice has no basis in government policy. Finally, little is known about teachers' attitudes or 'taken for granted assumptions' about learners and what sustains this potentially exclusionary practice. This is especially important to understand in the light of the country's inclusive policy where some schools aim for an inclusive educational environment (DoE, 2001).

1.3 Purpose statement

In response to this problem, the purpose of this qualitative research is to investigate secondary school teachers' attitudes about learning and learners that sustain the practice of streaming in Johannesburg schools. The intention is to investigate the extent to which teachers continue to believe in the practice of streaming in schools and to what extent this practice aligns with the principles of inclusive education.

1.4 Research questions

Accordingly, the research questions that are investigated in this study are as follows:

1. What are the teachers' attitudes about learners and learning that sustain the practice of streaming in secondary schools in the Johannesburg region?
2. To what extent is the practice of streaming congruent with the principles of inclusive education?

1.5 Research methodology

This study is located within the interpretivist research paradigm which aims to make meaning of human experiences (Cohen & Manion, 1994), and it makes use of a qualitative research design with a phenomenological research approach. The research uses various sampling techniques (purposive, convenience and snowballing) to find the participants who are best suited to this research. These participants are secondary school teachers at various schools across the Johannesburg region. The participants were interviewed about their attitudes towards streaming, and these interviews were audio recorded, then transcribed verbatim. A thematic analysis was used to interpret the data from the interviews. The data discussion and interpretation are presented in Chapter Four of this research.

1.6 Terminology

The following terminology relates to the important concepts explored in this study, and this section provides a brief explanation of these concepts.

1.6.1 Inclusive education

The inclusive education policies have aimed to play an important role in reforming both international and local schools. However, the true realisation of this field is not without its hindrances due to the broadness of how the concept of inclusive education is defined and how it manifests in practice in classrooms (Tomlinson, 2005). In this study, inclusive education is based on the following principles: it embraces the differences between learners (Florian & Spratt, 2013); it aims to provide effective, meaningful educational access (Black-Hawkins, Florian & Rouse, 2007), while changing the attitudes and practices that promote exclusionary practice in schools (DoE, 2001; Peters, 2007). Accordingly, this study is primarily concerned with assessing to what extent the practice of streaming aligns with these principles.

1.6.2 Streaming

Streaming is the separation of learners based on their cognitive ability (Gamoran, 1992) and placing them in classes where all the learners have similar abilities. These abilities are based

on how the learners performed during various assessments of the previous year (William, 2008). The practice of streaming is explored in this study, and the assessment of it is two-fold: Firstly, to find out what the teachers' attitudes are that have led them to endorse this practice; and secondly, to explore whether this practice aligns with the principles of inclusive education.

1.6.3 Attitudes

Teachers' attitudes are investigated in this study, with the aim of understanding how these attitudes informed their behaviour and sustained the practice of streaming. Tormala and Petty (2004) refer to attitudes as the degree of certainty a subject has, in this case the teacher, towards an object (learners), and how this influences the behaviour (the practice of streaming).

1.6.4 Framing

Framing refers to the amount of control a teacher has over the communication of knowledge, at what pace knowledge is transmitted and acquired, as well as to sequence what is taught first (Bernstein, 1986). Bernstein's (2000) concept of framing is used in the theoretical framework to provide a pedagogical practice that can be observed and described clearly. This enables the interpretation of the data obtained in this study, in terms of how teachers relate to learners, as well as to the curriculum.

1.6.5 School teachers and learners

The term 'school teacher' refers to the participants interviewed in this study, and their attitudes towards learning and learners that sustain the practice of streaming is the primary focus of this study.

Further, the term 'learners' refers to the students in these teachers' classes, specifically secondary school learners (grades 8 – 12).

1.7 Outline of chapters

This section provides a brief outline of each chapter in this research report.

Chapter 1: Introduction

This chapter provides a brief background to this study by introducing the important concepts that will be discussed and explored in the study. The chapter also provides the importance and purpose of this study as well as the research questions which framed the investigation.

Chapter 2: Literature review

This chapter sets-out the important concepts that pertain to this study. The conceptual framework outlines the background and importance of inclusive education. It also highlights the exclusionary practices that exist in education by illustrating how streaming can also be considered as an exclusive practice. Finally, this chapter discusses the theoretical framework (Bernstein's (2000) theory of pedagogical discourse) used to analyse the data provided. This discourse is based on Bernstein's (1986, 2000) concept of 'framing' which refers to the amount of control a teacher has over the communication of knowledge, at what pace knowledge is transmitted and acquired, and the sequence of what is taught first.

Chapter 3: Research methodology

This chapter presents the research paradigm within which this study is located, and the research design adopted in this study. The chapter also discusses and justifies the methods, instruments and analysis used to investigate the teachers' attitudes towards learners and learning that sustain the practice of streaming. Lastly, the ethical considerations, appropriate to this study, are also outlined and discussed in detail.

Chapter 4: Research findings, discussion and conclusion

This chapter discusses how the three themes are derived from the data collected, namely, learner difference, curriculum demands and teacher centredness. These themes are also analysed according to the literature. This chapter also provides an interpretation of the findings, which are derived from investigating school teachers' attitudes towards the practice of streaming and whether this practice is congruent with the principles of inclusive education. In doing so, this chapter highlights the themes identified in the collection of data in conjunction with Bernstein's (2000) theory of pedagogical discourse.

Chapter 5: Summary and Conclusion

The final chapter provides a summary of the research project and answers the research questions. The various limitations and recommendations for further research are also outlined.

1.8 Conclusion

The concept of inclusive education has been difficult to define, and even more so to visualise what it might look like in classrooms, because of the many barriers that hinder the implementation of inclusive education principles.

It is therefore the aim of a teacher and researcher who supports inclusive education principles to critique the current educational practices, by assessing their congruency with these principles. The next chapter will explore the aim of this research, by showing how this study was framed with insights from the broader literature.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

The purpose of this study is to investigate attitudes regarding learning and learners of secondary school teachers that sustain the practice of streaming and to understand whether this practice is congruent with the principles of inclusive education. As alluded to in Chapter One, the research of streaming has been limited in the South African context, and determining whether the principles of inclusive education align with the practice of streaming, is somewhat novel. This chapter also discusses the perceived need for this research, in locating the study within current research agenda and providing a theoretical framework for interpreting the research findings. In doing so, it provides a brief background of inclusive education from international and domestic perspectives for the purpose of highlighting the importance of inclusive education in South Africa. Furthermore, this chapter exposes several knowledge gaps that are apparent in the implementation of inclusive education. In particular, it focuses on the exclusionary educational practices that exist in schools to emphasise the perceived need for this study. Finally, Bernstein's (2000) sociology of education, specifically his focus on framing, provides the theoretical framework to guide this research.

2.2 Inclusive education

Inclusive education has often been described as an ambiguous and a broad concept (Ainscow & Miles, 2012). However, inclusive education cannot be defined in terms of how the concept has developed in a chronological manner. Instead, as Slee (2011) claims, it is important to discuss the different influences on this movement from the medical discourse of special needs education, to the social, critical theory studies. This is also reiterated by Walton (2016) who stated that the term *inclusive education* derives its meaning from the "discursive community" (p. 48) within which it is located.

2.2.1 Brief background: International and South African context

In discussing the concept of inclusive education, it is important firstly to provide a brief background about its foundation in both the international and domestic context. International conventions such as the Jomtien Thailand Convention have played an important role in reinforcing the movement towards an inclusive education through its policies. A few of these policies are mentioned in this review and they provide a context for this study. The primary purpose of the Jomtien Thailand Convention was to introduce 'Education for All (EFA)' (UNESCO, 1990). Its declaration, endorsed by 155 countries, "reaffirmed the notion of education as a fundamental human right" (Peters, 2007, p. 98). The EFA was organised through partnerships between government and nongovernmental organisations responsible for the development, execution and management of educational programmes, which aimed to make primary education accessible to all children. Accordingly, the EFA can be seen as supporting the conception of an integrated education for all children.

The second major convention was the EFA Framework for Action, Dakar (UNESCO, 2000). With regards to inclusive education, Peters (2007) contends that this framework developed from not only focusing on learners with "special needs", but it also challenged all exclusionary policies and practices in education. The emphasis was on preparing schools to do more than accommodate learners with “special needs” so that the schools reached out deliberately to all children instead of preparing some children to fit into existing schools (Peters, 2007).

For the purposes of this study, a greater emphasis is placed on the Salamanca Statement (UNESCO, 1994a) which saw a major shift from the notion of 'integration' to the concept of inclusion. The process of integration involves providing “additional support” in schools for learners with diverse needs, whereas inclusion is a more drastic and systemic move towards embracing the diversity of learners (Ainscow, 1995). It is important to note that the Salamanca Statement assumes that "human differences are normal and that learning must accordingly be adapted to the needs of the child rather than the child fitted to preordained assumptions regarding the pace and nature of the learning process" (UNESCO, 1994a, p. 7).

In terms of South African polices, the Salamanca Statement (UNESCO, 1994b) provided an extended outline as to what is defined as inclusive education, not only in terms of providing support for learners with disabilities, but also "extending educational opportunities to a wide range of marginalised groups who may historically have had little or no access to schooling" (Dyson & Forlin, 1999, p. 31). This expanded definition of inclusion includes learners with disabilities and all marginalised learners, which seemed to be an appropriate basis for the introduction of the South African Department of Education's White Paper 6 (Dyson & Forlin, 1999). The policy aimed to provide a framework for an "inclusive education and training system" (DoE, 2001, p. 5). It is similar to the international conventions, as the White Paper 6 aims to 'integrate' learners with barriers to learning into mainstream schools and also intends to restructure "attitudes, behaviour, teaching methods, curricula and environment" (DoE, 2001, p. 7) to accommodate learners' needs. The understanding that inclusive education is not simply the tolerating of difference but that it also embraces and creates the spaces that cater for these differences in learners is the basis of the inclusive education principles adopted in this study.

2.2.2 Importance of inclusive education

According to Florian and Spratt (2013), inclusive education is the way in which a teacher responds to learners' differences in a positive manner so that it does not lead to the learners being marginalised. Furthermore, they state that responding positively to diversity is not through the differentiated treatment of learners who are considered to be different, but that schools should create a teaching and learning environment in which all learners have equal opportunities to engage meaningfully while participating in school life. Black-Hawkins, Florian and Rouse (2007) claim that inclusive education involves all children being educated together in a unified system, irrespective of their differences, "where each individual is valued and is actively engaged in what is learned and what is taught" (p. 122).

2.2.3 Issues with the implementation of inclusive education

This sub-section deals with various issues with implementing inclusive education principles and practices in both internationally and in the South African context.

Internationally, Florian and Linklater (2010) state that many teachers believe that they are without the necessary qualifications to teach learners with diverse needs acts as a hindrance to the implementation of inclusive practices. In addition, Florian and Black-Hawkins (2011) claim that many teachers make decisions about their teaching based on the notion that learners have a fixed ability, or rather that schools use deterministic ideas of learners' abilities based on what is known as "bell-curve thinking" (p. 813). This thinking views the learners who fall in the centre of the curve as normal, but not the learners who fall on the peripheral. The result is that it leads to a comparison of what children of similar age groups can or cannot do, therefore it changes or rather lowers the teachers' expectations for the learners who fall outside of the centre of the curve. Tests are used to ascertain whether learners fall within the centre of the curve and these tests are used to determine the future of the learners as well as their past learning experiences (Florian, 2015). These tests indirectly create the impression that learners have a fixed ability, and that past learning is a good predictor of future learning: "the practice of predicting 'potential' on the basis of current achievement and using this rationale to design different educational experiences has damaging effects: reproducing social inequalities" (Florian & Spratt, 2013, p. 121). Furthermore, (Florian, 2015) suggests that this deterministic view of learners is premised on the medical deficit model, which highlights differences negatively, so that differences are magnified rather than positively determining learners' inherent abilities. This 'Bell-curve thinking' is entrenched in education because of the belief that it reflects society, although it limits the possibility of learning (Florian, 2015).

The notions of teachers' lack of experience (Florian & Black-Hawkins, 2011), their perception of their own lack of appropriate qualifications (Florian & Linklater, 2010) and their fixed ability views about learners (Florian & Black-Hawkins, 2011) inhibits the full adoption and implementation of inclusive educational practices in schools. This tends to lead to many practices that are adopted in international schools which create exclusionary learning environments.

Despite meaningful developments in the areas of policy and theory, it appears that there are significant gaps in the implementation of inclusive practices, which is shown particularly in the South African context. The difficultly in implementing the DoE White Paper 6 policy in

South Africa is due to its ambiguity in relation to the goals set, and the procedures needed to accomplish these goals (Donahue & Bornman, 2014). Furthermore, there is a shortage of teachers who are able to deal with diverse learners in their classrooms, especially with the consequential increase in their workloads (de Jager, 2013), which amounts to an additional constraint in attaining these goals.

Makoelle (2014) argues that the implementation of inclusive practices in secondary schools can also be hindered by teachers' beliefs and attitudes. These beliefs are rooted in the medical deficit model, as many South African teachers have been trained in this philosophy (Donohue & Bornman, 2014). Thus they hold the belief that learners should be separated and taught separately based on their perceived ability (Makoelle, 2014). This traditional way of thinking contradicts the principles of inclusive education. In addition to holding beliefs based on past experience and training, Makoelle (2014) highlights that many teachers have an "authoritarian attitude towards learners" (p. 187). This attitude makes the teachers believe that they hold the knowledge to be transmitted to learners and that the teachers do not need to reflect on their practices to improve on implementing inclusive learning environments. In addition, these beliefs linked to a lack of inclusive education training and the ambiguous DoE White Paper 6 policy play a major role in inhibiting the implementation of inclusive educational practices in secondary schools in South Africa.

2.2.4 How inclusive education is defined in this study

One approach to the realisation of inclusive education is to create an awareness of these exclusionary practices and to work towards eliminating them (Slee, 2011). This approach is grounded in critical education, which is rooted in a broader critical theory discourse. According to Hosking (2008), critical theory is a critique of capitalism, which aims to create an awareness of oppression, as well as to change society and ensure human emancipation. Critical education is also rooted in neo-Marxism, which propagates the notion that the functions of schools are there to legitimise and reproduce economic inequalities (Au & Apple, 2011). Further, schools are seen as a reflection of societal structures and are used to reproduce the dominant ideology of a capitalist society. Conversely, critical education is fundamentally concerned with social justice, and aims to create awareness by teachers to

become agents of change so that they reduce inequalities in the broader schooling system (Zeichner & Flessner, 2009). This view of education entails that there is an equitable allocation of resources, teachers' time and concern for all learners.

Teachers who adopt critical education in their teaching approach have characteristics such as being "socioculturally conscious" (Zeichner & Flessner, 2009, p. 297). This means that teachers are aware of the multiple ways in which learners make sense of their own reality and how these realities are influenced by the positioning of individual learner's social order. In addition, teachers need to view diversity in a positive light and that in itself enables learning instead of diversity being viewed as an obstruction to learning.

Zeichner and Flessner (2009) add that teachers should see themselves as agents of change, to bring about social justice, and to create learning environments that are responsive to all learners. In doing so, teachers are activists who aim to combat injustices and inequalities that are prevalent in education and schooling.

These inequalities can be found in the following ways: monocultural curriculum designs and assessments; the structure and layout of classrooms; the distribution of resources; and, the allocation of teachers (Au & Apple, 2009). In addition, schools find ways to socialise learners to think the same, even if this is achieved by separating and grouping them (Santomé, 2009). In this sense, Santomé (2009) speaks of "misguided curricular interventions" (p. 65), such as segregation, where schools group learners according to gender, ethnicity, social class or, more relevant to this study, abilities to 'deal' with the diversity of the learners.

Accordingly, the concept of critical education aligns with the ideas of inclusive education. Similar to critical education, inclusive education aims to create spaces for differences being appreciated, whereas previously, differences were marginalised and oppressed in education (Slee, 2009). According to Slee (2009), inclusive education aims to identify and reduce exclusionary practices in education, which is also the crux of critical education, because inclusive education is also a critical education project (Slee, 2009).

As stated earlier, inclusive education policies and the associated literature have led to major shifts in educational practice. These changes include: the integration of learners who were previously excluded from mainstream schools; the creation of an inclusive educational environment, which is concerned with redefining and restructuring of schools to accommodate these learners. Slee (2011) and Au and Apple (2009) argue that in order for one (a teacher) to make these necessary changes towards inclusive education, it is important that teachers are consciously aware of exclusionary practices and continuously redress any school systems which still promotes exclusion.

Walton (2016) states that inclusive education has progressed from predominantly focusing on the issues related to access towards those of embracing equity. Within the South African context, the importance of this conceptualisation shows that despite an increase in physical access to schooling, this change has not led to an increase in meaningful and equitable access to quality education (Lewin, 2009). There has been an increase in the school attendance numbers, but it has also resulted in an increase of the learners who are silently excluded. Hence the need for what Slee (2011) terms a radical approach to inclusive education and what Walton (2016) calls for an inclusive education that leads to equity rather than just access. In addition, Walton (2016) argues, in a way similar to Slee (2011), that for equity to be significant, it means that structures that promote exclusion must be reviewed, and that "an examination of the underlying structures that engender and perpetuate inequity" (Walton, 2016, p. 53) should be addressed. For the purposes of this study, the interest lies with considering inclusive education principles that align with the idea of promoting equity over access (Walton, 2015) as well as the awareness of and dismantling of exclusionary practices in education (Slee, 2009 & 2011; Au & Apple, 2009).

2.3 Exclusionary practices in education

Florian (2015) speaks about how schools deal with the differences among learners, and whether an acceptance of what is provided in schools meets the needs of most learners, though not all of them. Unfortunately, diversity among learners is viewed as a challenge in many schools and this supports the appeal of separating those regarded as ‘different’ to those perceived as ‘normal’. Ultimately, the emergence and development of special schools or

programmes that opt for the separation of learners further reinforce teachers' beliefs that they are inadequately equipped and/or ill-prepared to teach learners with diverse needs (Florian & Linklater, 2010).

2.3.1 Interventions reproducing exclusionary practices

Physical and emotional separation tends to lead to learners, who are regarded as different, to be more marginalised. Schools that perpetuate this practice are also prone to produce poor outcomes and consequently reproduce inequalities (Florian, 2015). Furthermore, in education, learners who are identified as different tend to be labelled as lacking in social capital as described by Bourdieu and Wacquant (1992), and also the school skills described by Florian (2015). These attributes are often considered important to succeed in the school environment.

Many schools adopt practices to deal with difference which can be viewed as exclusionary in nature. Some interventions are specially designed to accommodate different learners, such as in the form of learning support. This usually takes the form of a 'pull-out' system in schools, where the learner, who is considered to require additional support, is pulled out of the classroom to spend time with specialist support, while the other learners continue with the lesson. The issue is that these interventions reinforce the difference between learners which, in of itself, leads to the marginalisation of learners (Florian, 2015). Furthermore, Florian (2015) argues that targeted interventions in education, which are usually aimed at the bottom 20% of learners, isolate the difference, and it also leads to the pathologising of these learners. In some instances, the tools used as part of the targeted interventions do not necessarily enable inclusive practices and often create more barriers. In addition, these interventions are usually designed to address the differences and difficulties of a specific learner, rather than the demands of a task (Florian, 2015). The result is that this too reinforces the idea of difference, which is a limiting approach to any intervention and it does not lead to a learner engaging more meaningfully with a task.

2.3.2 Streaming viewed as a differentiation intervention

More relevant to this study is the use of streaming to deal with learners' difference in schools. Gamoron (1992) defines streaming as the separating of learners for certain subjects according to "measured or perceived performance in school" (p. 11). This is done by placing learners in separate classes so that learners, who have shown similar attainment ability in a particular subject, are placed in the same class. Classes are arranged according to different attainment abilities and are labelled in order as the top set, or the middle set or the bottom set (Boaler, William & Brown, 2000). William (2008) states that the separation is premised on "students' prior learning" (p. 1) and this has been a long-term arrangement. The practice of streaming is common due to various beliefs held by teachers about learning, where the most prevalent belief is the notion of a "fixed mindset" (Marks, 2013, p.1). As mentioned earlier, tests are conducted not only to determine the type of learner, but also to predict their learning ability (Florian, 2015) for the remainder of their schooling. The tests rank the learners according to that pre-determined ability. This means that this 'fixed ability' approach is usually relied upon to determine how to group learners for streaming purposes (Boaler, 2013).

There is a strong belief, based on the 'fixed ability' notion, which sustains the practice of streaming: by placing learners in classes with similar attainment levels, it leads to better classroom management and enhances differentiation, as teachers are able to prepare and pitch the lesson for a particular level of achievement, rather than to the wide range found in mixed-ability classes (Robertson, 2017). Some international research show that, streaming is currently viewed as the best way to deal with learners' diverse needs, and "unless a school can demonstrate that it is getting better than expected results through a different approach, we do make the presumption that setting should be the norm in secondary schools"~~.~~ (The White Paper Excellence in Schools, Department for Education and Employment, 1997, p. 38).

The term differentiation can be described as a model in "response to addressing learner variance" (Subban, 2006, p. 935). Carolan and Guinn (2007) claim that complementing teaching to the learners' needs, is a form of differentiation and in turn it promotes diversity. Sukhnandan and Lee (1998) state that streaming allows for the modification of the curriculum and instructional methods according to the learners' abilities. In terms of

curriculum modification, high-ability groups cover knowledge that provides the learners with access to further their education (Sukhnandan & Lee, 1998). The class environment facilitates more critical thinking and there is independent learning. In contrast, the lower-ability group's classes focus on covering the expected content, encouraging good behaviour and developing a strong work ethic (Sukhnandan & Lee, 1998). With regards to the differentiation of instructional methods, the higher-ability classes tend to work at a faster pace, with "an air of urgency, competition between pupils and heightened teacher expectations" (Sukhnandan & Lee, 1998, p. 29).

In summary, the general arguments advocating for streaming are that this practice can provide effective classroom management, because the teacher pitches the lesson to a particular level of ability. This means that no child is left behind or finds the lesson too slow (Robertson, 2017). However, this view leads to classes being regarded as homogenous, while overlooking the differences among learners within particular class sets (Sukhnandan & Lee, 1998). This approach does not always lead to meaningful educational access (Boaler, 2013).

2.3.3 Teachers' attitude towards streaming

Teachers' attitudes are an important consideration in this study, as it is through these attitudes that certain behaviours, or practices, are maintained. This study is interested in investigating teachers' attitudes about learning and learners in order to understand how the practice of streaming has been sustained in South African schools.

Tormala, Clackson and Petty (2006) speak of two aspects of the attitude of a subject: which they describe as attitude certainty and attitude advocacy and its relation to attitude – behaviour correspondence. Various ideas in the literature have stressed the importance of the role attitude certainty has played in predicting an individual's judgement and behaviour towards a particular object. The term attitude certainty refers to the degree to which the individual has a conviction about his/her attitude towards a particular object (Tormala, et al., 2006). This concept can be further described as having the following important aspects: firstly, the individual both has a sense of what their attitude is (attitude clarity); and,

secondly, that the individuals' attitude is valid (attitude correctness) as was stated by Petrocelli, Tormala and Rucker (2007). According to Basturkmen, Loewen and Ellis (2004), attitude can also be rooted in beliefs and these beliefs are influenced by experiences which shape how an individual responds to an object. This study is interested in how particular attitudes and beliefs shape the teachers' response to the practice of streaming. Burns (1992) states that teachers' beliefs "motivate instructional practices in the classroom" (p. 64). Furthermore, beliefs can also influence teachers' perspectives towards the appropriateness of a specific teaching approach (Cook, 2001). Hall and Hewings (2001) claim that when teachers approve of an approach, then they are likely to support its implementation, and in the case of South African teachers, this is shown by their adoption of streaming practices. Tormala and Petty (2004) state that the certainty an individual has about their attitude towards an object, then he/she will be less resistant to change or to be persuaded otherwise. In fact, attitude certainty can lead to predicable behaviour, thus the correlation between attitude certainty and behaviour. Therefore, the extent to which an individual, a teacher in this case, is certain about his/her attitude for example, about learners and learning, then it can lead to predictable behaviour, such as, supporting the practice of streaming. This creates conflicting views between a teacher who supports inclusive education and the current attitudes held by teachers that hinder the implementation of inclusive education principles. The attitudinal correctness and clarity a teacher might hold based on their training and beliefs that streaming classes is a way to deal with the diverse learner needs (Sukhnandan & Lee, 1998), and it undermines the idea that an inclusive education teacher needs to be an agent of change who aims to reduce social inequalities (Zeichner & Flessner, 2009).

There have been international studies on teachers' attitudes towards streaming. Sukhnandan and Lee (1998) state that the high-ability groups are usually placed with more experienced and qualified teachers. This encourages a positive attitude from the teacher towards the class, encourages a constructive class environment, which improves learners' achievements. In addition, the authors claim that the teachers with more experience are more willing to engage with mixed-ability classes in theory; however, in practice most teachers find teaching these types of classes very difficult.

Furthermore, teachers allocated to the high-ability classes tend to be more assiduous and increase the level of time and energy required to prepare for these lessons (Sukhnandan & Lee, 1998). According to Taylor (1993) teachers usually perceive the low-ability groups (bottom sets) to have discipline and motivation issues rather than the top sets. They tend to respond positively to teaching learners who are more receptive to learning and are motivated to further their studies. As mentioned previously, in the South African context, teachers believe that teaching mixed-ability groups leads to increased workloads when they respond to learners' differences (de Jager, 2013).

In exploring what teachers' think and their attitudes towards learning and learners, this study aims to understand how teachers' behaviour sustains the practice of streaming in South Africa.

2.3.4 Effects of streaming on learners

Research conducted mainly in the USA and the UK has highlighted the negative implications of streaming on learners, in particular, those placed in the lower-ability groups. The practice of streaming is prone to limiting the learners' achievements while also producing inequality (Boaler, 2013). This inequality is the result of a number of reasons: for instance, learners in the lower-ability classes tend to be over representative of the working class; and, usually schools assign teachers who have less experience to these classes (Boaler, William & Brown, 2000). Furthermore, the lower-ability groups spend more time on lower-order-thinking activities and behavioural issues whereas the higher-ability groups spend more time on higher-order-thinking activities (Gamoron, 1992).

Research conducted in the USA by the Education Endowment Foundation claims that the lower-ability learners fall behind by 1 to 2 months per year, in comparison to learners in a mixed-ability or a higher-ability group. Boaler (2005) claims that almost 88% of the learners who are placed in the lower-ability groups at a young age (preparatory school level) stay in the lower-attainment classes throughout their schooling. In another study (Boaler et al.,2000) conducted research on the learners' experience of streaming, where they found that in the

higher-ability groups, a few learners felt the pressure to perform in the "fast-paced lessons" (p. 633) due to this placement. In addition, learners placed in the lower groups were apathetic towards the limits set on their attainment, thus they did not work hard to improve their results and the label became a “self-fulfilling prophecy" (Clarke, 2003, p. 1). This label refers to the learners being aware of the groups they were placed in and the expectations for their performance regardless of how this process had been managed (Robertson, 2017). Another contributing factor that influenced how the learners were grouped was social class. Most of the working-class learners were placed in the lower-ability groups.

Furthermore, the practice of streaming leads to a labelling of learners. The issue with labelling is that it is another form of marginalisation. Messiou (2012) argues that a major contributing factor to marginalisation and its experience is the successful application of a label to an individual who falls outside the 'borders' of the norm. Furthermore, these borders and labels are socially constructed by those who have placed themselves within the borders (Messiou, 2012). What Becker (1963) terms as deviant, Messiou (2012) views as marginalised, although there is an agreement that these terms are reinforced by labelling these individuals. According to Messiou (2012, p. 11), “Usually, these labels do not hold a positive connotation in the education context; rather, students who are assigned labels are often seen as students who present potential challenges for school contexts”.

Considering that exclusion can take various forms, Messiou (2012) claims that marginalisation too takes on numerous shapes, and that there are "subtle forms of marginalisation [that] exist" (Messiou, 2012, p. 10). Marginalisation is the exclusion of an individual from participating fully in society, and in this instance, in schooling. Messiou (2012) reiterates this point when he suggests that marginalisation is “like the state of being outside a circle” (p. 17). Therefore, individuals who fall within the borders of a circle are considered to be 'normal' while those who fall outside the circle’s borders are considered to be 'outsiders'. It is the latter group who most often experience marginalisation. Furthermore, this group could be identified according to various characteristics, which could include different races, religions, socio-economic statuses, physical abilities or, in this case, mental abilities.

Finally, Ford (2005) echoes the idea that streaming is in response to dealing with a diverse group of learners who have different abilities, where the teacher can use a similar instructional method to teach learners whose abilities are labelled as the same. However, this separation of abilities has a negative impact on those placed in the lower-ability groups, as this practice is based on a fixed mindset concerning learners' abilities.

In conclusion, inclusive education is an important part of this study as it deals with the second research question of how the practice of streaming aligns with the principles of inclusive education. This field tends to be broadly defined and hence the importance of outlining how inclusive education is viewed in this study. Inclusive education is defined as creating classroom environments which provide more than just access to learning so that there is equity for all learners (Walton, 2016). Other definitions of inclusive education used in this study include: removing the marginalisation of all learners (Florian & Spratt, 2013); changing the attitudes and practices that promote exclusionary practices (DoE, 2001); and, embracing human differences (Florian & Spratt, 2013). Critical education is similar to inclusive education as it reiterates the notion of critiquing exclusionary practices in an attempt to eliminate them from our schools (Slee, 2011). These exclusionary practices range from differences in allocation of resources and time for different learners (Zeichner & Flessner, 2009) as well as the separation of learners based on their abilities (Santomé, 2009), which is known as streaming.

2.4 Theoretical framework: Bernstein's (2000) concept of framing

This research project draws on Bernstein's (1975, 1986 and 2000) theories of pedagogical discourse, in particular, the concept of framing. Bernstein is best suited as an aid to identify observable pedagogical practices that create exclusion in schools. Similar to principles found in inclusive education, Bernstein (2000) reinforces the idea that education can also lead to the reproduction of inequalities in schools. He states that the importance of education is to create awareness of exclusionary practices and to move towards a more democratic environment:

> Education can have a crucial role in creating tomorrow's optimism in the context of today's pessimism. But if it is to do this then we must have an analysis of the social biases in education. These biases lie deep within the very structure of the educational system's processes of transmission and acquisition and their social assumptions. (Bernstein, 2000, p. xix)

Bernstein (1986) described formal educational knowledge that is made available to the public in three components, termed "message systems" (p. 49): the first is curriculum "what counts as valid knowledge" (p. 49); the second is pedagogy, what "counts as valid transmission of knowledge," (p. 49); and, the third is evaluation, which is "the valid realisation of knowledge on the part of the taught" (p. 49). The curriculum can either have a strong boundary or a weak one, and he uses the term 'classification' (Bernstein, 1986) to describe this idea: "Classification thus refers to the degree of boundary maintenance between contents" (Bernstein, 1986, p. 49). The second and more relevant idea for this study is that of Bernstein's 'message system' which refers to pedagogy. This is the pace the teacher imparts knowledge and the learner absorbs it, which Bernstein (1986) terms "framing." He defines "framing" as follows: "This frame refers to the degree of control teacher and pupil possess over the selection, organization and pacing of the knowledge transmitted and received in the pedagogical relationship" (Bernstein, 1986, p. 50). Finally, the third 'message system' is evaluation, which is most often clearly defined, as either the learners' answers are right or wrong in subjects, such as, Mathematics and the Sciences.

As mentioned above, this study is focused on the pedagogical relationship between teacher and learner, which is termed framing by Bernstein. Framing establishes control of relations within a context (Bernstein, 2000), because it regulates relations between transmitters (who are teachers in this study) and acquirers (the learners). Framing also represents the means by which acquirers acquire a legitimate message. Furthermore, Bernstein (2000) claims that framing refers to the nature of control over the following factors: "selection of the communication, the sequencing, pacing (the expected rate of acquisition), criteria and social base which makes transmission possible" (pp. 12 - 13). This study is more interested in Bernstein's (2000) recent work on framing, specifically, what is known as the "rules regulated by framing" (p. 12). This principle is usually expressed as follows:

$$\text{framing} = \frac{instructional\ discourse\ ID}{reguative\ discourse\ RD}$$

The first regulation is the rules of social order, which convey the standards of social conduct (Hoadley, 2007), also referred to as regulative discourse, and this system is seen as the dominant discourse (Bernstein, 2000). The regulative discourse deals with how the values, the rules of social order or rather the hierarchical interactions are conveyed within a pedagogical circumstance. This gives light to a particular label assigned to the acquirer of knowledge (the learner in this particular case). Bernstein (2000) states that when strong framing occurs (the transmitting of the message) then the labels assigned to the acquirer are more in line with notions of diligence, alertness and responsiveness. In this case, there is a clear teacher/learner condition where the hierarchical relations are clear, and the pedagogical practice is determined by the teacher. Whereas in a weak framed condition, the labels assigned to the acquirer are described as inspired and collaborative., The importance here is that the nature of the label is usually dependent on the strength of the framing.

The second rule is that of discursive order, which is also known as the instructional discourse. As already mentioned, the instructional discourse is rooted in the regulative discourse (Bernstein, 2000). This discourse deals with the selection of communication, sequencing (what comes first and next), pace ("rate of expected learning and acquisition" (p. 12)) and criteria of knowledge, a strongly framed condition will have control over these aspects. The instructional discourse conveys specific skills and their relation to each other.

Bernstein (1975) states that the concepts of pacing and sequencing carry a social class assumption and that strong pacing produces elitist assumptions. Bernstein's (1975) previous work notes that schools transmit both the behaviour and character deemed appropriate by a school and skills through certain school practices. The transferring of skills or rather formal knowledge (instrumental order) can function within a multi-layered manner, where learners are seen to have fixed attributes, and are grouped according to those attributes (age, gender and even ability), as he states that "the instrumental order may be transmitted in such a way that it distinguishes sharply between groups of pupils" (Bernstein, 1975, p. 38). Further, he notes that this function has the potential to be divisive, because clear distinctions are made between learners and what is needed to transmit skills.

The use of Bernstein's (2000) notion of framing is usually used to understand the impact and implication of knowledge and social classes, where a function of knowledge is also a function of power (Bernstein, 1986). However, in this study, the use of framing is not about the social class systems portrayed in schools. Instead, framing is used to explain various pedagogical practices that occur in schools, and in this case, to explain how the practice of streaming is sustained. Bernstein (2000) claims that framing can be used to examine the school rules and rituals, which are made according to regulative discourse, while the curriculum is observed through the instructional discourse.

2.5 Conclusion

Learner difference is a growing phenomenon that teachers must address in their classes (Tomlinson, 2005). In an attempt to respond to these differences, various interventions are implemented such as the practice of streaming. Although this practice can be viewed as a differentiation tool, as both curriculum and instructional methods are modified (Sukhnandan & Lee, 1998), there are certain beliefs such as fixed ability (Florian & Linklater, 2010) held by teachers that tend to promote more exclusionary practices in schools. The literature provided a brief outline of the influence of teachers' attitudes on behaviour, which enables an understanding of how their attitudes sustain the practice of streaming in schools. In addition, the literature helps to assess whether streaming aligns with the way inclusive education is defined in this report.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1. Introduction

This chapter outlines in detail the research methodology that has been utilised in this study to investigate school teachers' attitudes towards the practice of streaming in secondary schools the Johannesburg region. There is an outline of the research paradigm within which this study is located, and the research design is provided, as are the research methods and instruments adopted for this study. . Finally, the ethical issues that were taken into consideration while conducting this study are also discussed in this chapter.

3.2. Research paradigm

This study is located within the interpretivist paradigm where the approach to research is to "understanding the world of human experience" (Cohen & Manion, 1994, p. 36). The interpretivist paradigm considers that the research must be sensitive to the social context within which the participants operate in and that the researcher is aware of their own experiences in trying to reduce bias interpretation (Creswell, 2014). Unlike the positivistic paradigm, the interpretivist acknowledges the influences of individual context on research and hence the view that "reality is socially constructed" (Mertens, 2005, p.12). In this circumstance, this study aimed to understand teachers' beliefs about streaming and designed the interview questions to probe these perceptions.

3.3. Research design and limitations

This study made use of a qualitative research design to respond to the main research question. The qualitative research design is used to describe, explain and interpret behaviour often in its natural setting (Denzin & Lincoln, 2000). Furthermore, this design is best suited

to pursue an understanding of human behaviour (Badenhorst, 2008). Various approaches are used in the qualitative research design, however, for the purposes of this study, the phenomenological research approach was employed. As discussed in chapter one, the purpose of the study is to investigate attitudes about streaming of secondary school teachers in the Johannesburg region and to determine the extent to which this practice is congruent with the principles of inclusive education. In essence, this study is concerned with investigating the deeply rooted assumptions school teachers have about learning and learners, which promote and sustain the use of streaming in schools. Hence, the preferred use of a phenomenological approach, as this is best suited to understand and interpret "taken-for-granted knowledge" (Scott & Morrison, 2005, p. 172) that produce a certain phenomenon. This approach emphasises the subjective knowledge and perspective of the participant, and in addition creates insights into the individuals' motivations, actions and assumptions (attitudes) about a particular phenomenon (Scott & Morrison, 2005), which in this case was streaming. The phenomenological research approach was relied upon to describe rather than explain the identified attitudes. Various limitations are identified with this type of approach, and these include the possible subjectivity of the data collected due to the researcher's bias towards the topic (Creswell, 2014).

A common limitation of this approach is the subjectivity which can create issues regarding the credibility of and the trustworthiness of the data. It was important during the process of data collection that I presented as accurately as possible what was revealed in interviews. This raw data was shared with the supervisor of this study to eliminate any manipulation of data due to bias. Another limitation according to Miller (2013) is that the data collected from a phenomenological research approach is not generalised data, due to the types of methods used and the size of the sample. The generalisation of data was beyond the scope of this study, as mentioned in the research question that there was a specific region where the data would be collected. However, this study did attempt to interview participants from a variety of schools. These participants varied in age as well as experience. The level of qualitative data also made it difficult to find the most suitable way to present the data (Maxwell, 2013), which was another limitation experienced in this study, hence the decision to combine the presentation and analysis of data. Finally, the process of data collection and analysis is a time-consuming task (Creswell, 2014), and this was also experienced in this study.

3.4. Participants: Sampling procedures and limitations

This research was conducted in the Johannesburg region, and it focused on teachers who have had experience in teaching streamed classes. The sample chosen was based on convenience, purpose and some snowballing sampling was used to select the 20 teachers.

Several teacher gatherings were held in the Johannesburg region, and these were predominantly Mathematics teachers from this region. These events enabled access to numerous participants at a time, and the ability to conduct numerous individual interviews at one particular event made for convenience sampling. The practice of streaming is predominantly implemented in Mathematics classrooms, so these events were selected for a particular purpose. All teachers interviewed indicated that they teach in streamed Mathematics classes at various schools in the Johannesburg region. This study made use of snowball sampling to determine the appropriate teachers to interview. Since these events happened on a termly basis, the teachers have established relationships with each other and were aware of their colleagues' work experience. Thus they were able to advise on which teachers to interview. The experience of teachers who have taught or teach at secondary schools that practise streaming in the Johannesburg region was also taken into consideration. The snowball sampling (Creswell, 2014) approach entailed finding a few participants relevant to this study, then asking for their referrals to other participants.

As mentioned above, the teachers were selected based on the referrals of previously interviewed teachers, who indicated that their colleagues have had years of experience in teaching streamed Mathematics classes. An appropriate number of participants was interviewed for this study, as there were 20 participants. The number of participants was determined when data saturation was reached, and no new information was offered when interviewing additional participants.

The limitation is that this type of sampling cannot lead to generalising about the data findings. However, as indicated earlier, generalising is beyond the scope of this study. The reasons for selecting these participants was because school teachers are directly involved in the teaching of classes that are not diverse in terms of abilities. Thus this was a purposive or

judgemental sampling, as the participants were purposefully selected due to their experiences, attitudes and their involvement in the practice of streaming. In this regard, purposive sampling involves deliberately selecting participants who are relevant to the research question (Bryman, 2008).

3.5. Data collection and limitations

This section covers how the primary data used in this research was collected. It discusses and substantiates the utilised research method and it provides an outline of the data instrument.

3.5.1 Research method

To best investigate the attitudes of teachers, this study made use of individual semi-structured interviews. This method aimed to make meaning of teachers' attitudes about learning and learners which promotes and sustains the use of streaming. Semi-structured interviews were best suited, as they provided the platform to enquire into the interviewees' responses. These types of interviews consist of a predetermined set of open-ended questions, which creates room for an interviewer to probe for clarity and it gives the interviewees an opportunity to expand their responses (Scott & Morrison, 2005). Further, this method is topic or themed centred: instead of producing structured questions prior to the interview, the interviewer is aware of a theme that needs to be explored during the interview process. Individual semi-structured interviews have various benefits, such as, creating a platform to probe more deeply during interviews in order to gain knowledge and understanding of the participants' attitudes towards learners and learning that sustain the practice of streaming (Scott & Morrison, 2005).

For the purpose of this study, only individual semi-structured interviews were used, instead of focus groups or closed-ended surveys. This study was also concerned with understanding the deeply rooted assumptions that sustain the practice of streaming, which required the participants to be comfortable in revealing their attitudes about learning and learners without the influence of others (which might be the case in a focus group). This approach ensured that all participants had an opportunity to contribute (Creswell, 2014). In terms of surveys, these

tend to use closed-ended questions, which do not enable the interviewer to probe further for clarity or to explore the concepts in any depth (Creswell, 2014).

However, the use of the individual semi-structured interview method also had its shortcomings. For instance, it is difficult to predetermine the themes that emerge during the interviews. Thus, it could create the impression of interviews being seen by, as 'data generating' rather than 'data collection' (Schultze & Avital, 2011). Furthermore, the method of individual semi-structured interviews was time consuming for both the participants and the researcher. It was costly to travel to interview the different participants and to transcribe the primary data. The use of interviews also limits the sample size of participants. In some cases, not particularly in this case, the participants could feel a level of discomfort and might not be motivated to reveal their true feelings about the topic. In addition, it could be an inconvenience to be interviewed (Mason, 1996). Considering these potential shortcomings, I reassured the participants of their anonymity (which will be discussed later in this chapter) and sought to create a space where they felt comfortable to share their views at a place and time most convenient for them.

3.5.2 Research instrument

Prior to the collection of data, various important steps were taken. Firstly, there was the design of an interview schedule which related to the research questions and objectives (see Appendices). To design the interview schedule, the study's research question was considered, and it included the areas of knowledge relevant to answering the interview questions (McMillan, 2010). These areas of knowledge were derived from the concepts discussed in chapter 2. Various guidelines were also taken into consideration, such as, to avoid questions that contain more than one idea or theme, and to make questions clear and relevant to the study (McMillan, 2010). Due to the nature of this study and the possibility of bias (as mentioned earlier), the interviews were also designed to avoid any researcher bias (McMillan, 2010). These questions were also further refined by the supervisor of this study.

Secondly, an application for ethical clearance was submitted to the Ethics Committee of the Wits School of Education, which was granted (see Appendices section). Once the ethical clearance had been granted, then permission was sought from various parties when

necessary, and this will be discussed in greater detail during the section on ethical considerations in this chapter.

Once the interview schedule had been amended, then the actual interview process commenced. The researcher scheduled a convenient time and place to conduct the interviews with the participants.

3.6. Data analysis

A thematic analysis was utilised to interpret the data from the interviews, where the "analysis of qualitative data to refer to the extraction of key themes…" (Bryman, 2008, p. 700) happened. Next, the coded data was analysed for common themes derived from the interviews.

This study made use of Creswell's (2014) steps to approach the data analysis. In terms of the interviews, the first step involved transcribing all interviews to prepare for the analysis. Step two involved the reading through of one interview at a time in order to gain a general sense of the data. This included reflecting on the overall meaning of the interview, reviewing what the participants said, what was observed in terms of tone and the general impression created during the interviews. At this point, various notes were made in the margins of the data, which allowed for ideas to take shape (Creswell, 2014). The highlighting of various sections of the transcribed interviews was used to link the similarities between interviews and to consider the differences too. These similarities were named, and formed into various categories, which enabled them to be coded (Bryman, 2008).

Thirdly, the process of coding the data was done according to Bryman's (2008) steps. This involved making a list of the various categories identified and jotting them down, and then grouping similar categories together. The next step was to organise, highlight, group similar categories into columns by sorting them as important, unique and other. At this point, as Creswell (2014) suggested, the categories were analysed according to the conceptual framework outlined in the previous chapter, while keeping in mind the overall research question of this study. This coding process required creating a list of the codes (which are derived from the re-organised categories), then going back to the data with the abbreviated

codes and assigning these codes to the relevant segment. This was completed by hand and took time to complete.

After the completion of data coding as Creswell (2014) suggested, the fourth step used the coded data to identify and provide a rich description of an emerging theme. At this point, the connections between the themes and the theory also emerged. These themes were more than just descriptive in nature, as they were also interpretative, which is the best outcome according to Bryman (2008). A sample of the data coding process of the thematic analysis is illustrated in the following figure.

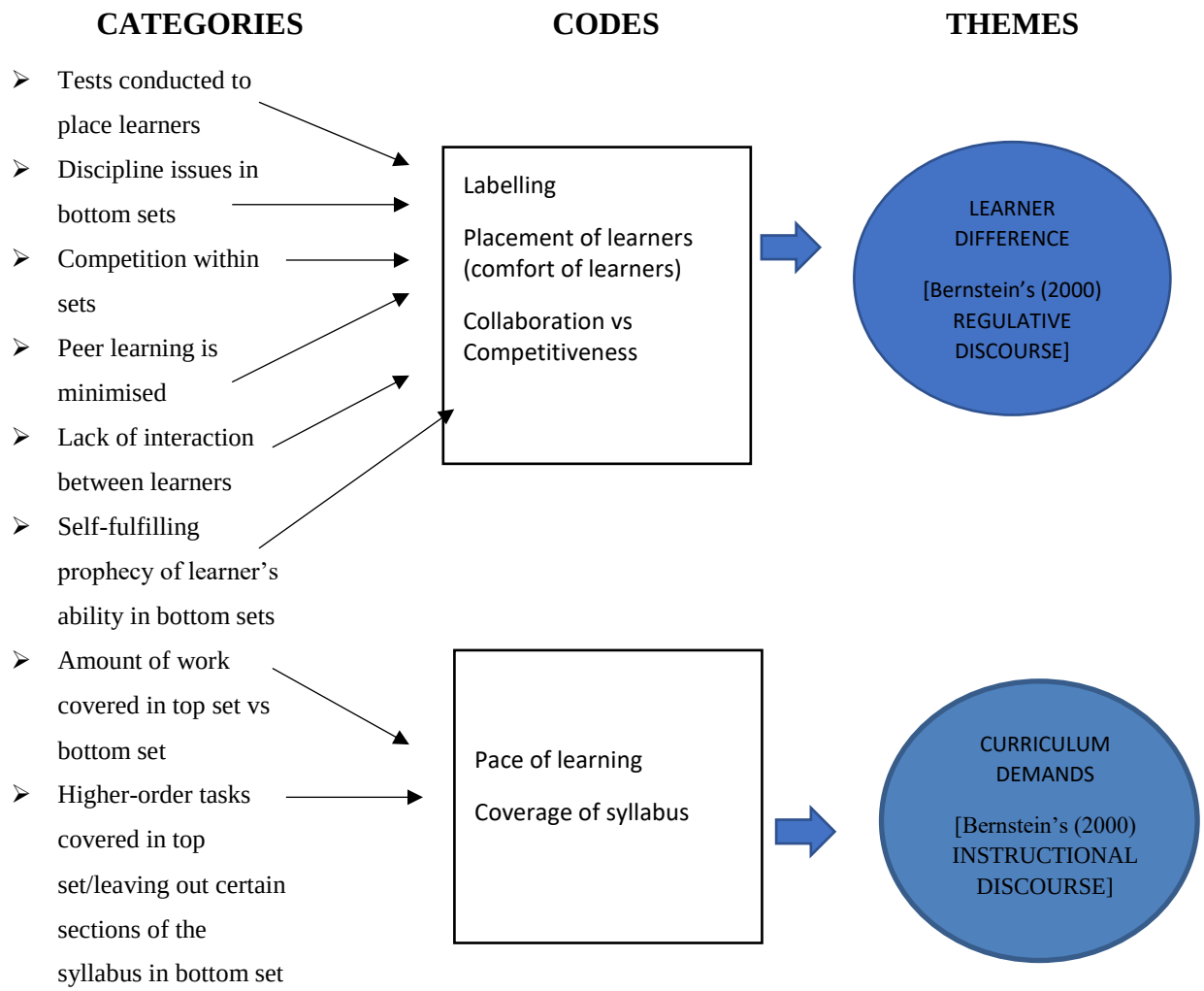


Figure 1: Data coding process

3.7. Research rigour

The issues of credibility and authenticity were also taken into consideration. Credibility deals with the reliability of the research, so that the results are dependable and could be replicated in other studies. Authenticity refers to genuineness of the research findings, where these findings that are recorded truly describe the phenomena being researched (Morrow, 2005). Several strategies, suggested by Creswell (2014), were implemented to ensure the qualitative credibility and authenticity of the research., According to Creswell (2014) the following are important to consider in terms of authenticity: the research report stated and clarified all bias, which involved reflecting on how the interpretation of the findings were informed by the researcher's background. The final strategy employed was to validate the research report with the use of peer debriefing or an external auditor (Creswell, 2014). In this case, the supervisor of this research project reviewed this study, and advised where necessary, as the supervisor chosen was knowledgeable about this topic. This provided a sense of confirmability which then also validated the research project.

With regards to ensuring the qualitative credibility of the research, Creswell (2014) suggests checking the transcripts to make sure that they accurately reflect the recordings. In addition, to compare constantly the data collected with the themes identified. It is also important to make notes during the process to avoid any misunderstandings or misrepresentations of the meaning of the findings.

Tracy (2010) also suggests criteria that could be integrated in a qualitative research to ensure that rigorous research has been conduct. One criterion includes demonstrating that the qualitative research has a "Worthy Topic" (Tracy, 2010, p. 840)., The topic of inclusive education is very important in the South African context and, more specifically, to show why the implementation of fully inclusive practices is necessary. Through reviewing the literature on this topic, it became clear that it is difficult to articulate what an inclusive classroom should look like. But rather, as suggested by Slee (2011), to critique the current educational practices as to how inclusive these practices are. This research attempts to provide a critique on streaming, which is a common educational practice in order to make the topic relevant and interesting. The second criterion proposed by Tracy (2010) pertains to the sample used to collect data. As mentioned previously, the sample consisted of Mathematics teachers and this

research only interviewed 20 participants due to data saturation. This sample was best suited for the collection of relevant data appropriate for this study, because streaming is practised in many Mathematics classrooms. Tracy (2010) also suggests ethical considerations as a criterion and ethical procedures were followed, which will be discussed later in this chapter. Finally, there is the criterion of "[m]eaningful coherence" (Tracy, 2010, p. 840), which deals with whether the research achieved its aims. In this case, the aims were to understand the beliefs and attitudes teachers have about learners and learning that sustain the practice of streaming, and also whether this practice aligns with the principles of inclusive education. Through interviewing the sample of teachers, this research provides an explanation of these attitudes and an analysis and interpretation as to whether these attitudes are congruent with inclusive education principles.

For this study, the research findings as well as the discussion and interpretation are presented in a single chapter. This was done by reporting on the key findings of the research, and making use of samples from the raw data as quotations to illustrate the findings. Then there was a discussion and an interpretation based on the themes created in conjunction with the conceptual framework, as discussed in the Literature Review chapter.

3.8. Ethical considerations

As part of criteria of conducting primary research with the Wits School of Education, each research project is required to complete and submit an Ethical Clearance Application to the Human Research Ethics Committee (see Appendices). This section outlines the aspects that were considered to attain ethical clearance.

3.8.1 Informed consent

Prior to the data collection, it was important to inform the participants of the purpose of the study as well as their required contribution to this study, which in this case consisted of interviews that would be audiotaped. A letter was sent to school teachers requesting their consent to participant in this study (see Appendices). Attached to the letter is a consent form (see Appendices), which allows the participants to give their consent to participate in the study. This letter is an acknowledgement of the protection of human rights when conducting this study (Creswell, 2014), as the form attached to the letter clearly described the proposed

research and was explicit about the level of participation required of the teachers. The research methods and time involved to conduct this research were also explained in a language that was appropriate for the participants, which ensured that this voluntary agreement was easily understood.

3.8.2 Voluntary participation

As these types of interviews could lead participants to experience some discomfort, it was important to ensure that the participants in this study were not coerced in any form to participate. They were informed about their participation being voluntary and that they could terminate their participation in the research at any point in time. As a researcher, being cognisant of the potential risks to the participants and trying to minimise these risks is of importance (Creswell, 2014). As mentioned in the previous section, the awareness of the level of inconvenience (having to sit through an interview and participate) and the possible discomfort (school teachers' reflecting on their attitudes about learners and learning which sustain the practice of streaming) was taken into consideration. Strategies were employed to create a level of decorum and a comfortable space to deal with any difficult questions. The participants were also informed of their confidentiality and anonymity; however, these issues are discussed next section. In addition, the interviews were scheduled at a time appropriate and a place convenient to the participant and they were also informed of the estimated duration of the interview. These strategies enabled the voluntary participation of interviewees and fortunately none of the participants withdrew from this study.

3.8.3 Confidentiality

The nature of the questions asked during the interviews, which were questions about the teachers' attitudes on a practice that is utilised, has been stigmatised and associated with negative connotations. However, if issues of confidentiality and anonymity are considered important in a study, then this helps to address these concerns. The principles of confidentiality and anonymity protect the interest of the participants in the process of collecting data that can be viewed as sensitive (Creswell, 2014), which was done at all times in this study. It was explained that the identity of the schools and participants will be kept confidential by ensuring that no identifying information is made available to anyone other

than the researcher. The participants were assured that the collected data (both hard copy and electronic, written and audio recorded) would be kept private and stored safely in a locked cupboard at my home and that this data should be destroyed between 3 – 5 years after the completion of the research project.

3.8.4 Anonymity

To ensure anonymity, neither the participating schools nor the participants (school teachers) were mentioned by name. Furthermore, they were not identifiable by characteristics such as race or gender. Pseudonyms were utilised for the participants. Then the participants were each coded with the letter T to indicate Teacher and a number 1 – 20 was used to indicate the amount of participants interviewed [T1 to T20]. Anyone with knowledge of the project (the supervisor of this study) was also asked to keep this information confidential.

3.8.5 Availability of research

The data obtained is used in this research report, where the findings are made available to both the University of Witwatersrand and the participants. In the case of the participants, they were informed of the findings and the themes that emerged to ensure that the data was recorded accurately. The participants were also informed that, if requested, the final project would be made available to them, so that they could read and comment upon it.

3.9. Conclusion

This chapter provided the research paradigm and design ‘fit’ for this study. Details pertaining to the methods, instruments and data collection used in this study were discussed, which also took into consideration issues of authenticity, credibility and ethics. Chapter four presents the research finding, discussion and interpretation based on the conceptual framework discussed in chapter two.

CHAPTER FOUR: RESEARCH FINDINGS AND DISCUSSION

4.1 Introduction

As indicated in chapter three, this study made used of Creswell's (2014) thematic analysis to code the data. The data was collected into the following themes, namely, learner difference, teacher centredness and curriculum demands. Each theme will be discussed in terms of the data collected and interpreted according to the literature presented in this study. The purpose is to describe how the teachers' attitudes towards learners and learning helps to sustain the practice of streaming and to assess the extent to which this practice aligns with the principles of inclusive education.

4.2 Differences between learners

A theme throughout this study has focused on the differences between learners, because classrooms are becoming more and more diverse (Darling-Hammond & Snyder, 2000 and Tomlinson, 2005). This was also a theme evident in the data collected, as the teachers who participated in this study expressed the idea that streaming was a way of dealing with these learners' differences. Teachers also identified the different ways learners behaved, thought and acted in the top and bottom sets. This section deals with the expected behaviour of learners, their feelings towards where they were placed and how collaboration versus competitiveness highlighted the differences between learners in the bottom set from those in the top set.

4.2.1 Expected behaviour of learners

As discussed in the literature, streaming is based on separating learners according to their cognitive abilities (Gamoran, 1992) and then placing the learners who have similar abilities in a group. However, this separation has led teachers to develop a generalised perception of the learners' expected behaviour, which is dependent on their ability group, and the teachers

also tend to label the learners according to these groupings. The expected behaviour set by the teachers was evident in the data collected and will be presented from two perspectives. Firstly, the expected behaviour from teachers refers to how the teachers expected each group to behave based on their abilities. Secondly, the way the conduct of these particular learners was influenced by being placed in these different groups.

65% of the teachers who participated in this study spoke of how the learners in the high-ability groups were regarded as focused, more determined than those learners in the middle and low-ability groups. This was shown by the following:

> T4: *YES. And focused and determined.*

A minority (15%) did mention that they found the learners in these high-ability groups to be more arrogant, and this was clearly articulated by some of the teachers:

> T2: *The difficult for us is to stimulate that top set because they, sometimes they get very arrogant because they are the top set so obviously they are the cream of the crop.*

> *T14: some staff members have said for your bottom set you will find they've been labelled that way and they don't get motivated. And then the top set feel like they're too arrogant to learn.*

The labels and perceived behaviour is not same for the lower-ability groups. 60% of the teachers stated that they found the learners in the low-ability groups lacked motivation and sometimes discipline was an issue. Teacher two expressed this as:

> T2: *I found teaching those weak kids they were very demoralised, they didn't want to study, they think they could study maths and the teachers struggled, who ever had that class, struggled with them.*

Another teacher stated the following:

> T11: *come into a weaker class and they feel like they're ostracised and punished because they know their behaviour is not good they have their own issues there, feeling like why am I not worth it.*

As seen above, some of the teachers experienced differences in the learners' behaviour, and this depended on the ability group that the school had placed the learners in the classroom. The top performing learners considered themselves as the 'cream of the crop', while the learners in the low-ability group considered themselves the opposite. This led to the labelling of learners based on their ability groups.

The labelling did not only come from the teachers, because the learners also labelled themselves in accordance with the classes to which they had been assigned. This was a strong element picked up by 80% of the teachers: even though these different sets were not explicitly conveyed to the learners and their parents, the learners discerned how the classes had been divided and then labelled themselves accordingly. This labelling applied particularly to the learners in the bottom set, where learners would see themselves as academically inferior and apply this label to themselves. Teacher eight said:

> T8: *We also have a class where we have children that struggle, and it just so happened that they got given the name or they gave themselves the name of lost boys.*

Another teacher also reiterated this:

> T10: *I think one of the major concerns is that very often the lower ability students take on labels like slow or, things like that. Lost boys or lost girls and things like that and it's all got to do with their mindset.*

In addition to labelling themselves in a way that represented their struggles, the teachers stated that sometimes the learners produced work that constantly reflected these struggles. The learners tended to perform poorly as they did not believe they were able to achieve better results. This kind of outcome was also indicated in the literature as Clarke (2003) claimed that learners in the bottom set produce poor results as they performed to the perceived expectation, which is termed as a self-fulfilling prophecy. 40% of the teachers were explicitly aware and bothered by this practice of streaming. One of the teachers expressed reservations about the possible effects of placing learners in low-ability groups and their response to this situation:

> T7: *The kids in a weaker ability then also say you already think I am stupid so why bother. I really think the damage there is significant. I don't think it is actually worth it you know because of that damage to that group of kids… You are already almost putting an expectation on them even before they have even tried and you know sometimes you got to take a bit of time and it takes, sometimes your kid has a weak ability, he is not weaker, he just needs more time and that is not a weaker ability.*

Teachers' expectations regarding the behaviour of the learners in different ability groups have led the learners to behave as expected by the teachers. The learners in the lower-ability groups have labelled themselves in ways which reflected their academic difficulties, and performed accordingly. This labelling was not seen in a positive light in the literature, as labelling was usually done to marginalise (Messiou, 2012). It appeared that these labels become the reality for the learners who were placed in the low-ability groups in this research.

4.2.2 Learners' feelings towards their placement

The data collected showed that the placement of learners in classes of similar abilities either created a comfortable environment or one of high pressure. In the low-ability classes, the comfort of learners seemed to be a huge benefit as seen by the teachers. 80% of the sample indicated that when learners are grouped together according to their ability (applicable mostly to the bottom set), then they are more comfortable and confident to seek assistance

when necessary during class time. Further, that the learners do not feel intimidated to ask questions as they would be in mixed-ability classes. According to teacher eight:

> T8: *The girls definitely feel more comfortable being on their own, they feel more comfortable with student with like ability, nobody gets embarrassed, nobody is scared to ask a question, nobody is being ridiculed.*

This school separates learners according to their abilities and gender. This teacher remembered what her students felt:

> T5: *but the girls themselves have said ma'am, I feel so much more comfortable being in this class because I don't get embarrassed in front of the boys. They don't think I'm stupid when I ask questions or when I tell you I really don't understand and I ask you to explain for the fifth time.*

Another teacher mentioned:

> T3: *So they feel comfortable, you know, it's a class with no judgement and so they feel they can say what they need to say.*

However, this feeling was not widely expressed by teachers who teach the high-ability classes, because in most instances the classes created a high-pressure environment where learners felt the need to outperform the other:

> T5: … *sometimes I feel the top classes have a lot pressure not only that the girls put on you but that they put on themselves yes so I find it very emotional especially in the girls' school, a very emotional class.*

The pressure experienced in the high-ability classes tied in with the competitive environment created in the classes, which is discussed in the next section.

4.2.3 Collaboration versus competitiveness

The learners' differences also indicated the different ways the learners interacted with each other in terms of collaboration and competition. Although 65% of the teachers believed that collaboration is an important part of learning, they indicated that the learners in the high and low-ability classes seldom worked together on a task, but for different reasons. In the high-ability classes, there was a competitive environment in the classes, so collaboration was minimal as each learner tried to gain the highest possible result on their own. One teacher expressed this view:

> T6: *... what I was going to say is a con to the streaming is because you get this really competitive class, they are so competitive and they are worried about their own marks they actually don't care about each other and for me, well that is in my experience what I have seen with that top, top, class so it is almost as if they become selfish with their knowledge, you know, like I don't want to share it you know.*

The pressure to perform well meant that the learners became more competitive, and they kept their knowledge and understanding to themselves. In this case, competition did not always create a positive environment as peer learning was diminished. In addition, the pressure in the learning environment could become stressful for the learners.

In contrast, the reason for reduced collaboration in the low-ability classes was because the learners did not know the work well enough to collaborate. 30% of the teachers also said peer learning in the low-ability classes could be a challenge, as the learners were not able to assist one another, because they all struggled with the same content. This meant that information flowed only from the teacher:

> T14: *Although it is a disadvantage for the bottom set because all of them, they don't know what is happening so they're grouped together. At the end of the day nobody can help anybody.*

25% of the teachers where the learners experienced competition in the low-ability classes, stated that the competition created a positive environment, as it fuelled a positive work ethic. According to teacher nine:

> T9: *And so if you're in a group with similar abilities, like I'm teaching a grade tens, the boys, and they all have a very similar ability and they're all weak but they compete with each other. They want to beat each other and I think I'm getting the most out of them.*

To summarise streaming seemed to create a more competitive environment and to minimise the collaboration between learners. However, the reasons for the lack of collaboration and the effects of increased competition differed between the ability groups.

4.2.4 Discussion and interpretation

As illustrated above, the practice of streaming is practised in response to the learners' differences experienced in classes. The data collected showed that teachers distinguished between the learners based on how they performed in various tests and separated the learners accordingly. In addition, the teachers also differentiated between the learners in terms of their behaviour in different ability groups, their perceived feelings towards their placement and how the learners interacted with each other.

According to Bernstein (2000), regulative discourse deals with the rules of social order, where a strongly framed condition will have a clearly laid out, hierarchical relationship. In addition, a strongly framed condition creates the expectation of how learners should conduct themselves which leads to labelling. As seen in the data, teachers can clearly see the *differences between the learners* and the teachers have perceptions of how the learners experience a particular subject, Mathematics, in this case. These teachers' perceptions led them to decide that learners clearly belonged to different classes in schools. The strongly framed regulative discourse also created clear hierarchical relations between teachers and learners, which reinforced the expectations of how the learners conducted themselves in the various groups.

The collected data showed that learners were labelled according to the results attained in assessments, and these results determined whether a learner belonged in a high-ability (top set) or a low-ability (bottom set) grouping. In addition, this labelling according to results reinforced the expected behaviour and character of the learners. Learners in the high-ability groups were usually labelled as diligent (Sukhnandan & Lee, 1998), and as seen in the data, teachers reiterated the idea that learners in high-ability classes were focused and determined, yet also arrogant. In contrast, the learners in the low-ability groups were labelled as lacking in discipline, motivation and work ethic (Taylor, 1993). The labels assigned to the low-ability groups are predominantly negative, as these learners fall outside the 'norm' of how a learner should perform at school (Messiou, 2012).

Although labels were implicit as far as the teachers were concerned, due to the existence of strong framing, the labels became explicit. This was shown in the data from the teachers and at times even by the learners, when they labelled themselves as the 'lost boys'. Therefore, a strong framing led to a clear pedagogical practice (Bernstein, 2000), and in this case a clear pedagogical practice, such as streaming, created and reinforced labels. As stated by Clarke (2003) the labels applied to the low-ability classes tended to become a self-fulfilling prophecy, because learners performed according to the perceived expectation of the stream in which they were placed. This was also emphasised by the data collected in this study, as learners in the low-ability sets tended to have discipline issues and did not work as hard to achieve better results in order to move into a high- ability set.

Teachers' attitudes towards the benefits of streaming outweighed issues reinforced by the separation of learners and the consequences of labelling specifically with respect to the low-ability groups. Many teachers perceived that the learners were more comfortable when they were placed in similar ability sets, and this was shown in particular for the low-ability groups. Although the underlining notion of the practice of streaming is to distinguish between the cognitive ability of learners, teachers believed that this created a better learning environment. However, the only distinguishing factor was how the learners performed in tests, which was used to determine their set. This meant that learners within an ability group were identified as the same (Sukhnandan & Lee, 1998), which did not lead to differentiation within the specific ability groups.

The teachers also recognised the lack of collaboration in both the low and the high-ability groups, and the role increased competition played in these sets, which was at the expense of peer learning. Florian (2015) argued that some targeted interventions only reinforced the differences between the learners in a negative way and this was shown in the theme of learner differences. In addition, these differences, where the learners were placed, were dependent on their performances in various tests. This notion was grounded on the view of learners having a fixed ability (Florian & Black-Hawkins, 2011). This deterministic view is based on the medical deficit model, and, as stated in the literature, this highlighted the differences in a negative manner, because it distinguished between learners based on what they should be able to do. This means that this practice of streaming does not promote the principle of inclusive education, as it is based on embracing and working with difference for an equitable and meaningful educational experience (Florian, 2015).

4.3 Teacher centredness

The majority of teachers in this study had a positive attitude towards streaming, as it was a way to manage a class of diverse learners' needs effectively. However, the theme of teacher centredness was derived from the impression that the teachers also found streaming to be convenient for their own practice. One participant mentioned that the practice of streaming was sustained not necessarily for the betterment of the learners, but for the teacher's convenience. The following sections based on this theme will show how streaming enables some ease in the teaching process.

4.3.1 Timetabling

The issue of timetabling is important in subjects such as Mathematics, where the subject is offered as Core Mathematics and as a less academically challenging subject, Mathematical Literacy. Teachers tended to foretell whether some of the learners might continue to take Core Mathematics for their secondary schooling. This led to the timetable being designed in such a way that when learners who were placed in the bottom set converted to Mathematical Literacy, then there was no need for them to change classes. Therefore, the grouping of these

learners was convenient for the purpose of timetabling. This issue of the timetable was expressed by a teacher in the following way:

> T6: *Our school has tried something in grade ten this year is that they deliberately plan because we had class size problems in you know when kids start dropping so they would plan for one teacher per kid in grade ten to anticipate swopping from maths to maths lit half way through the year and it has now sort of happened. Not all the kids that we wanted it to happened with but a lot of them wanted to drop so then they reshuffle the classes and send those who are remaining on maths off to where there is a bit more of a space and that teacher took over all the ones who dropped to maths lit because the math lit class in that key was now too full.*

Although this is a long quotation, it illustrates how the scheduling at some schools purposefully places learners who teachers predict will not continue with Core Mathematics in the same low-ability class. Then this becomes the reality for these learners. This is similar to Clarke's (2003) self-fulfilling prophecy as to how learners make decisions in line with the teachers' expectations.

4.3.2 Teacher preparation

Another aspect of this teacher centredness theme was lesson preparation. It is similar to the issue of coverage of the syllabus (which will be dealt with in the next section), but this aspect of the theme is two-fold. Firstly, there is the issue regarding the difficulty of preparing a lesson for a mixed-ability class. 70% of the participants believed that preparing for a mixed-ability class was impossible, as the teacher would not know at which level to prepare the lessons. The reasons given were the differences between learners in terms of pace and their knowledge of the content. In one of the schools, the grade 8 and 9 classes were not streamed, and this teacher expressed the difficulty of teaching these classes as follows:

> T9: *I personally find it very difficult to teach eight and nine. I find it very difficult in the sense that you've got a range of 90% in the class where some students are getting 100% and some students are getting 10%. And your natural*

thinking is that you want to help the people that get 10% but then there are people that get 30% or 40% or 60% that want to get 80% but you neglect to help them and give them 100% of your attention. Even the people that get 100%, you're not stretching them because they're already getting 100%, so you tend to focus on the people that do really badly.

80% of the teachers who participated in this study believed that streamed classes allowed for better lesson preparation, because the teachers were able to pitch the lesson at a particular level. Teacher three expressed this as follows:

T3: … *definitely teaching to a streamed class is infinitely easier. It might not always be better but it is infinitely easier for the teacher because you actually are able to decide on the level that you are going to pitch it and what you are going to bring in and when you are going to put extension and when you are not.*

The other element was the amount of time teachers spent on preparation and how this varied depending on the streamed classes. It seemed that the teachers spent more time on research and preparation of the lessons for the high-ability groups than for the low- ability groups. The teachers spent time trying to find ways to extend the high-ability groups, whereas the preparation for the low-ability groups only reinforced the basics. This was shown by teacher two's comment:

T2: *… often I leave out half the syllabus with my lower sets, just focus on the basics and the top set I am able to extend…*

This amount of preparation covered is based on the content needed to be covered, which also influenced the preference a teacher had for teaching a particular group over another, and this is covered in more detail in the next section.

4.3.3 Teacher preference

Finally, the energy and time spent in conducting research to extend learners' knowledge and the fact that the learners could challenge and make valuable contributions to the lessons meant that many teachers enjoyed teaching learners who were placed in the high-ability groups in comparison to those who were in the low-ability groups. This was explained by teacher two:

> T2: *I think I enjoy the strong ones because they are challenging so you get asked questions that you don't think of at the time and so you actually have to research keep yourself on top of the topic and that, ja.*

60% of teachers who participated in this study mentioned that they preferred teaching learners in the high-ability groups.

4.3.4 Discussion and interpretation

This section deals with the aspects of streaming that seemed to be to the teachers' advantage.

The literature presented in this study did not deal with the issue of timetabling so that it was convenient for teachers who anticipated that the learners would change from Core Mathematics to Mathematical Literacy. However, teachers' attitude about placing learners in particular classes due to a predetermined view about their abilities sustained the practice of separating them. In addition, placing learners in a stream, specifically the low-ability stream, created the impression that the teachers expected these learners to 'drop to Mathematical Literacy' and this became a 'self-fulfilling prophecy' (Clarke, 2003). Many of the learners ended up making the very decision that their teachers expected.

From the data collected, it seemed that the teachers' ability to differentiate lessons to fit learners' diverse needs was considered a difficult task. The result was that many teachers believed they were inadequately trained to deal with these differences (de Jager, 2013). Streaming also created an environment where it was easier for teachers to prepare lessons for a specific ability group. However, the data showed that many teachers put more effort into preparing lessons for the high-ability groups in comparison to the low-ability groups. In addition, teachers preferred teaching the learners in the top set. This difference in the effort

spent in preparing lessons for the different streams also contributed towards creating the inequalities that were stipulated as one of the drawbacks of streaming (Gamoran, 1992). This meant that learners in the low-ability classes were not exposed to the benefits of the teachers' extended knowledge from their additional research. Another reason for the strong preference of teachers teaching learners in the high-ability groups might be attributed to the learners seeming more responsive to learning (Taylor, 1993).

Streaming creates a strongly framed classroom environment where there is a clear hierarchical relation. The teacher is clearly the carrier of the information and the learners mostly acquire information from the teacher. This is more evident in the low- ability groups, as these learners are perceived to struggle with subjects such as Mathematics, and are largely dependent on the teacher. A strongly framed environment reinforces control at the hands of the teacher (Bernstein, 2000): hence the creation of a timetable for the teachers' convenience; the different effort made in preparation for lessons with the high-ability and the low-ability groups; and the preference for teaching the high-ability groups. Furthermore, this enables a hierarchical relationship, from a superior to a subordinate, in this case, from a teacher to a learner. Information usually flows in one direction only, from the top down, hence the teacher-centred classroom environment.

4.4 Curriculum demands

Teachers' expectations on how the learners would cope with the demands of the curriculum provided a strong motivation for sustaining the practice of streaming. Robertson (2017) stated that teachers believed streaming enabled effective classroom management, as they taught the same content at a particular pace. This view was strongly supported by teachers in this study.

4.4.1 Pace of learning

90% of teachers believed that learners have various paces in acquiring information. Due to this diversity, the participants in this study saw streaming as a technique that was used to deal

with these variations. There were diverse learning abilities evident in classes. Many teachers believed that it was nearly impossible to teach at the same pace for all learners, so that the top achieving learners were still engaged and challenged, while the lower achieving learners did not fall behind. One of the teachers stated:

> T14: *I think in this case it's pacing. Our pacing must go with the set. Top set for example, you find that they must be having the fast pace, like learning everything like in, maybe a chapter in one lessons. Whereas a chapter in the bottom set might take two or three weeks.*

All the participants involved in this study believed that teaching to a similar ability group enabled them to teach at a certain pace and to pitch (or to prepare) the lesson for learners who shared a specific ability. The teachers also believed that learners who worked at the same pace contributed to a positive class dynamic:

> T21: *Each group work at their respective pace. Weaker students will not be over-shadowed by the brighter student and will have the freedom to explore with other students in a similar position.*

The ability to teach at a particular pace also decreased the perceived workload of teaching learners with diverse learning needs (de Jager, 2013).

4.4.2 Coverage of syllabus

The data collected showed that streaming affected the coverage of the syllabus in two areas. Firstly, streaming led to teachers not being able to cover the entire content required in a specific grade, which meant that certain work was left out, even though these parts of the curriculum were in assessments. This affected only the low-ability groups due to the pace that the learners learned at, as this teacher explained:

> T20: *In the lost boys, if we can call them that, we go slower. But in order to go slower, we absolutely cannot teach everything. There's just no time. This*

syllabus is so full anyway. So we leave out those sections where those children, for where they are at, would not have coped anyway. So we then just train them and say do you see this question? When you see that, just put a line through it and spend that time on something profitable.

However, this situation was not experienced by the high-ability classes, as the learners cover double the amount of work than the low-ability classes.

The teachers in this study stated that in an attempt to combat the issue of not covering the concepts in the required time, they offered extra lessons. However, as seen in the above quotation, some teachers felt that the content would be too difficult for their classes and instructed them to ignore certain aspects of the syllabus, as it was beyond what the learners needed to know to pass. This meant that learners could face an assessment where only 80% of the content had been taught to them. There was only one teacher who noted that this decision affected the learners' ability to meet the demands of further education:

T3: *Yes we never have, like in the last five years a hundred percent university entrance, so even the very slow kids get into university but they really don't stay very long. They get there but it's because they have had their hands held all the way and it is a bit, that is the negative.*

The second area concerning the issue of syllabus coverage is that learners in the low-ability classes are not challenged or extended as are the learners in the middle and top sets. The lessons for the low-ability groups are not designed to deal with higher-order questions, instead they are purely designed to cover the basics. As one of the teachers said, we:

T10: *Help the "lower group" by going at a slower pace and then repeating and you know, reinforcing topics. And then having the higher achieving students in a separate group where we can extend them even further and expose them to research-based topics and things where they, you know, they're given more opportunities for independent study and extending themselves more*.

This finding is reiterated by the literature, as Sukhnandan and Lee (1998) stated that lessons in high-ability classes were more challenging and dealt with higher-order-thinking elements, while the focus in low-ability groups was on covering the expected content, the learners' good behaviour and their work ethic.

4.4.3 Discussion and interpretation

Instructional discourse refers to the rules that deal with the selection of communication, the sequencing of information, as well as the pace at which information is transmitted and acquired (Bernstein, 2000). When a strongly framed instructional discourse is created, then the teacher has "explicit control" (Bernstein, 2000, p. 13) over the elements stated above. By streaming Mathematical classes, the teachers have created control over their classrooms in the following ways: the learners are grouped according to their ability to cope with a teacher's pace; the teachers organise and transmit knowledge, which is set by the curriculum; and, they have control over how that knowledge is communicated. So much so that the teachers have control over the level at which they prepare lessons. This proved to be a challenge for teachers who taught mixed-ability classes, because the teachers have little control over the pace and at which level to pitch their lessons, as indicated in the teacher centredness theme.

The data collected showed how teachers chose which concepts to exclude in their teaching of the low-ability groups, where they modified the syllabus to what they perceived could be handled by the learners. This reduced what the learners were exposed to and showed how the learners in the low-ability grouping were faced with unequal opportunities. This type of differentiation can lead to the "Matthew effect" which is the reproduction of educational disparities, as inequalities between those with less and those with greater educational needs increase (Westwood, 2001). One teacher noted that although her streamed classes performed well at school due to the adjustments made to the syllabus, the learners were inadequately prepared for the demands of higher education, where they struggled. This practice might create further inequalities beyond secondary schooling, however, this discussion would go beyond the scope of this study. As stated in the literature, a study conducted by the Education Endowment Foundation found that learners in the low-ability groups fell behind by 1 – 2 months per year. Although this study did not explicitly research this aspect, the limited

coverage of the entire syllabus and the lack of extension of content could be a contributing factor towards learners in the low-ability groups falling behind. This means that some schools are not providing an inclusive learning environment. Although the learners in the low-ability groups have access to learning, it is not the same or equitable to those in the high-ability groups (Walton, 2016).

According to Bernstein (1975) strong framing, where there are clear distinctions between learners, can be "potentially divisive", which is seen in this case of streaming. Learners are divided based on their ability, and teachers believe that they can categorise learners according to where they belong. These categories also lead to the labelling of learners, in particular, those in the low-ability groups. Although the Bernstein (2000) refers to the regulative and instructional discourse as being independent, in the case of streaming, they are both strongly framed and they seem to mutually reinforce each other. The condition of a strongly framed transmission of skills leads to the division of learners according to their perceived differences.

Sukhnandan and Lee (1998) indicate that teaching lessons with learners who have diverse needs is extremely difficult and the practice of streaming is in fact a way to differentiate and offer a manageable solution to this issue. De Jager (2013) claims that teachers believe that teaching mixed-ability classes leads to an increase in workload, and this study found that teachers prefer to teach at a particular level, where they are able to pitch the lesson to a specific ability group. However, the issue is that the preparation conducted for teaching low-ability groups is significantly less than what was done for the high-ability groups, as was also stated in the review of the literature (Sukhnandan & Lee, 1998). Learners in high-ability groups are usually extended, as teachers conduct research to keep these learners challenged. In contrast, the teachers' lessons in the low-ability group reinforced the basics and there was no attempt by the teachers to extend these learners' knowledge.

4.5 Conclusion

Teachers have a positive attitude towards the practice of streaming, as they viewed streaming as a form of managing the learners' diverse learning needs. According to the teachers, streaming had the following advantages: it enabled better classroom management (Sukhnandan & Lee, 1998); the teachers prepared and pitched lessons at a particular level; they perceived that learners in the low-ability groups were more comfortable; and, finally, the teachers had the ability to modify the curriculum. For the majority of the teachers, it seemed that the benefits of streaming were perceived to outweigh any drawbacks.

However, a small margin of teachers believed that these drawbacks had a significant impact on their learners. Although streaming was seen as a form of differentiation (Robertson, 2017), where teachers adjusted their instructional pace and the curriculum to fit the needs of specific learners, this was not without significant drawbacks for some of the learners. Firstly, streaming highlights the differences between the learners in a negative manner. This is especially true for the learners in the low-ability groups, where teachers perceived these learners' conduct to be lacking in discipline and motivation. In turn, this could affect how the teachers would respond to teaching learners in these streams. The data showed teachers preferred teaching learners in the high-ability groups, because those learners are perceived as hard-working (Sukhnandan & Lee, 1998). Although teachers stated that learners in the low-ability groups preferred being grouped together as they found it less intimidating, some of the teachers noted that the environments become more competitive and that there was a lack of peer learner support in both groups. The practice of streaming also benefitted the teachers and it enabled better classroom management (Taylor, 1993), as the teachers were able to prepare and deal with a similar ability group, which they found to be easier.

CHAPTER FIVE: SUMMARY AND CONCLUSION

5.1 Introduction

This research was informed by two schools of thought. The first notion of inclusive education was conceptualised as adjusting the learning environment to deal positively with the diverse learning needs of learners (Florian & Spratt, 2013). The second notion was the practice of streaming, which is the separation of learners based on their cognitive ability so that teachers teach learners of similar ability groups (Gamoran, 1992). This study was interested in critiquing certain educational practices that still prevail in South African schools that might not be based on principles of inclusive education. In doing so, the study was framed by the following research questions: What are the attitudes of teachers about learners and learning that sustain the practice of streaming in secondary schools in the Johannesburg region? The second question was: To what extent is the practice of streaming congruent with inclusive education principles?

The study adopted a qualitative research approach by interviewing teachers, in particular, those who taught Mathematics. The reason for this choice of participants was that streaming is mostly prevalent in Mathematical classes. In addition, the data was analysed according to how these teachers' attitudes sustained the practice of streaming and also whether this practice aligned with the principles of inclusive education. This chapter provides a summary of the findings of this research, as well as the limitations of this study and makes recommendations for future research.

5.2 Answering the research questions

This section provides a response to the following research questions, namely, what are the attitudes towards streaming of secondary school teachers in the Johannesburg region, and to what extent does this practice align with the principles of inclusive education?

5.2.1 What are the attitudes of teachers about learners and learning that sustain the practice of streaming in secondary schools in the Johannesburg region?

As stated in the literature, the concept attitude refers to the degree to which a subject has a conviction (Tormala, Clarkson & Petty, 2006). In addition, there is clarity and level correctness that shapes their response towards an object (Tormala & Rucker, 2007). According to Basturkmen, Loewen and Ellis (2004), attitudes are rooted in our beliefs which also affect how we respond to various objects. In terms of educational practices, Burns (1992) states that those beliefs can act as a motivation towards a particular teaching practice. This study was interested in the attitudes of teachers that motivate the sustaining of streaming as a teaching practice.

Most of the teachers who participated in this study had a positive attitude towards the practice of streaming. Firstly, many teachers believed that streaming was a way of dealing with the diverse needs of learners. The teachers were able to distinguish the learners' differences based on results attained in tests. This perception influenced the teachers' expected behaviour of learners in high versus low-ability groups. The teachers perceived that streaming created a positive environment for the learners in the low-ability groups, because many teachers expressed the view that these learners felt comfortable and less intimidated when placed with learners of similar ability. These views drove the belief that by separating the learners the teachers would be able to manage classes better.

The second theme did not necessarily deal with teachers' attitudes but rather the practices carried out by the school and teachers which promoted and sustained the streaming. This study found in some schools the separation of learners was based not only on their respective abilities, but also on whether the learners would continue to do Core Mathematics or change to Mathematical Literacy. This kind of scheduling in the form of setting up the timetable in a particular way was done for the teachers' convenience. This led to many of the learners in the low-ability groups changing from Core Mathematics to Mathematical Literacy, as expected by the teachers, so that their perceptions of the low-ability groups became a self-fulfilling prophecy (Clarke, 2003).

Another finding was that teachers made time to prepare more for the high-ability classes, as they offered the learners some extended work. In contrast, they spent less time on preparing for the low-ability classes, and focused only on covering the basics. Most teachers stated that they preferred teaching high-ability classes, because the work was more challenging. Taylor (1993) also claimed that this could be the case, as teachers believed that the learners in the high-ability classes were more motivated to work.

Teachers in this study believed that by placing learners in similar ability groups, then the lessons could be designed to best suit the needs of learners in terms of pace and the content covered. The belief is that streaming enables effective classroom management (Taylor, 1993), as lessons are pitched at a particular ability and learners remain engaged. Teachers stated that they experienced difficulties when teaching classes with varying ability: the learners who would have been placed in the high-ability classes get bored, while the learners who would have been placed in the low-ability classes, fell behind. This led to a disruptive classroom environment, as teachers could not engage with all the learners, therefore the teachers perceived streaming as a way to address this problem. Placing learners in similar ability groups enabled teachers to teach at the same pace and to cover the same amount of content. This meant that the teacher either was teaching the basics to the whole class (low-ability learners) or doing some extension, higher-order-thinking activities with the whole class (high-ability learners). This enabled the teachers to have more control to determine what content to teach and its pace.

5.2.2 To what extent is the practice of streaming congruent with the inclusive education principles?

To assess the extent to which the practice of streaming aligned with the principles of inclusive education, this section highlighted how inclusive education was defined in the literature.

Firstly, inclusive education is the positive response to learner difference (Florian & Spratt, 2013). On the one hand, the teachers expressed the view that the learners in the low-ability groups felt more comfortable when they were placed in the similar ability groups. It seemed that the learners were less intimidated to seek the teachers' assistance and the competition

among them was beneficial to their learning. In this case, the placing of learners in similar ability groups created a positive learning environment. However, Rouse (2007) claims that inclusive education involves all children being educated together in unified system, irrespective of their differences, which is far from this case of streaming, as separation is the fundamental practice adopted.

Walton (2016) stated that inclusive education was more than just physical access and that it led to the embracing of equity. If the learners in the low-ability groups mainly covered the basics, while those in high-ability groups covered high-order-thinking, which enabled them to succeed in higher education, then how will the inequality gap be reduced? A teacher in this study made a point that the learners in the low-ability groups could pass their final grade 12 year, but they would fail in their tertiary education. Inclusive education aims for social justice, by creating an awareness for teachers to be agents of change, in order to reduce inequalities in the schooling system (Zeichner & Flessner, 2009).

In addition, resources must be equitably allocated to different learners for education to be considered inclusive. If teachers are spending more time preparing lessons for high-ability groups and finding ways to extend those learners, while only covering the basics for the low-ability group, then this does not lead to an equitable outcome for all learners. Furthermore, the differences in time and effort that the teachers spent preparing for the high-ability groups in comparison to the low-ability groups provided another form of inequity. Therefore, in this case, the practice of streaming does not align with the principles of inclusive education. As discussed earlier, the learners in the high-ability groups covered more content, and were given extension activities. In contrast, the learners in the low-ability groups experienced a reduced coverage of the syllabus, which meant learners in the low-ability groups fell behind in their secondary schooling and beyond.

Streaming also highlighted the differences between learners in a negative way, as labelling became a common practice. The issue with labelling was that it had negative connotations for those learners who were marginalised. For instance, learners in the low-ability groups were labelled as lacking in motivation by the teachers or they even labelled themselves as ‘lost boys’. These labels then became a ‘self-fulfilling prophecy’, which led the learners to

perform as they were labelled, or as expected by their teachers. This also affected how teachers responded towards these learners, as teachers preferred teaching the learners in the high-ability groups in comparison to those who are in the low-ability groups (Taylor, 1993).

Many teachers believed that streaming was a form of differentiation and an effective way of managing the differences between the learners. The issue with differentiation is that it reproduced educational inequalities, and increased the gap between those who were considered to have ability and those who were considered to lack ability (Westwood, 2001). The result of differences in coverage of the content had various outcomes for the groups: in some cases, it meant that extension activities were used, while in other cases the basics alone were covered. The fact that low-ability classes did not cover all the topics also increased educational disparities. In addition, the learners placed in the similar ability classes were assessed in the same way, as there is no differentiation with regards to a particular ability group. Thus, the ways differentiation was practised by streaming learners, this practice did not necessarily promote inclusive education principles.

The practice of streaming, which is comparable to the medical deficit model, saw difference as a challenge that should be dealt with separately. It reinforced differences between learners in a negative way, which led to practices such as labelling and inequitable access to meaningful learning.

5.3 Limitations and recommendations

The following are the limitations faced in this study:

Generalisability: Due to the nature of the research design and research method, this study cannot be used to make generalisations. Most of the participants in the sample were private school teachers, which represented a minority of teachers in South Africa. However, this study did attempt to interview participants from a variety of schools. These participants were varied in age and experience and the subjects they taught.

Predominantly Mathematics teachers: This study made use of predominantly Mathematics teachers for two reasons: firstly, because streaming is usually practised in Mathematics; and, secondly it was convenient to interview these teachers, as I could attend many events hosted by and for Mathematics teachers and learners.

Time management: Due to the design limitations, I had a limited amount of time to collect data to develop generalised arguments. However, the most suitable data was collected for this study.

Motivation: My driving force to conduct this research was deeply rooted in the critical theory notion of addressing systems that reproduced inequalities, specifically in education. As a student of inclusive education, I became interested in critiquing educational practices that reproduced inequalities through their exclusionary nature. Throughout this research, I experienced some difficulties in terms of approaching this topic in an objective manner. It is possible that this subjectivity affected the research of appropriate literature or the design of the interview schedule. I had to be constantly aware of my bias even when interviewing participants who truly believed that streaming was the best way to deal with the learners' diverse needs in our classrooms.

Notwithstanding the limitations faced in the study, I believe that the study of inclusive educational practices is vital for further studies. The potential for further research exists in the following areas:

- Possible research that emerges directly from this study may involve studying how learners placed in low-ability groups are able to cope with further education at a tertiary level. The importance of this research is that it would provide a way of measuring the inequalities created by exclusionary practices in schooling.

- The use of critical theory as the research paradigm will enable a study from the learners' point of view. This would enable more than just describing the teachers' perceptions, and a study from the learners' perspectives could critique the teachers' 'taken-for-granted' assumptions.

5.4 Conclusion

This study set out to investigate teachers' attitudes towards streaming and whether this practice was congruent with the principles of inclusive education. The purpose of the project was to understand how these attitudes have sustained the practice of streaming in schools. This was set against the backdrop of inclusive education and framed by the concern for prevailing exclusionary practices in schools, regardless of the movement towards providing an inclusive educational environment in South Africa. Appe for all of our learners and not apply techniques that suit us and the majority of learners.

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APPENDICES

INTERVIEW QUESTIONS

BACKGROUND QUESTIONS

1. How long have you been teaching at a school that practice streaming?

STREAMING PRACTICE QUESTIONS

2. What is your understanding of streaming?
3. Why does this school practice streaming?
4. How does your school stream their classes? What decisions are made about which streams learners belong to?
5. Have you identified the problem of huge diversity in learning speeds of various students?
6. What do you believe is the purpose of this practice?
7. What is your opinion about learners that streaming facilitates?
8. What is your opinion about learning that enables the streaming?
9. Do you believe streaming achieves the desired outcome? What does it achieve?
10. How do you think streaming affects students of different achievement levels academically?
11. How do you think streaming affects students of different achievement levels socially?
12. Do/Did you have any difficulties or concerns about your streamed classes?
13. Which groups do you prefer teaching or working with?
14. How do the learners respond to streamed classes?
15. What, in your opinion, are the benefits of streaming? Should it be practiced more often by schools and colleges?
16. What are the drawbacks?