THE PERSISTENCE OF THE TEACHER-CENTRED MODALITY IN SOUTH AFRICAN PUBLIC PRIMARY SCHOOLS: A MATTER OF CONTROL AND COMPLIANCE

Shamima Vawda

Supervisor: Professor Brahm Fleisch

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ABSTRACT

The study assumed that the teacher-centred modality is an institution in South African public primary schools. It applied the institutional analysis and development framework to explore how teachers teach and view on the structure of the teaching action situation. The study observed 54 lessons and interviewed 47 teachers from three public primary schools in three townships in the Johannesburg Central education district.

The study found that teachers across the sample schools, education phases, grades and subjects use a lesson routine. The lesson routine assigns limited actions to teachers and learners. Teachers must deliver curriculum content at the pace prescribed by the national curriculum and assessment policy statement, assign learning tasks for learners to complete, and control classroom interactions. Learners must be quiet, follow teachers' instructions dutifully, answer teachers' questions promptly, and complete learning tasks quietly on their own. These actions generate limited interactions about curriculum content between learners, learners and the teacher and learners and learning and teaching support material. The limited interactions produce the following observable outputs: an hierarchical pedagogic relation, the curriculum is presented as uncontested facts, evidence of curriculum delivery in learners' exercise books, and unofficial streaming of learners.

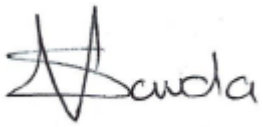
Teachers believe that the tightly prescribed curriculum and narrow bureaucratic accountability measures used to monitor its delivery, the legislation governing sanctioning of learners, the large and overcrowded classes and the heterogeneity of learners in multiple indicators influence their teaching and choice of teaching modality. These exogenous variables create the opportunities and constraints that teachers believe they face in a lesson. In this context, teachers adopt 12 shared rules and norms to regulate their behaviour in a lesson. These shared rules and norms prescribe the actions and outcomes they must do, must not do and may do in a lesson. They incentivise teachers to choose actions that allow them to control their emotions and comply with the prescriptions of curriculum policy and legislation governing sanctioning of learners. As a result, teachers choose a limited set of actions that routine lessons. It takes the form of whole class teaching with limited classroom interactions, a list of content from the textbook and Department of Basic Education workbooks and cognitively simple learning tasks.

The exogenous variables that teachers identified in this study that affect teaching are not unique to South Africa: they are intrinsic to the organisational form of modern teaching, namely age-graded classes where a single teacher is responsible for a group of heterogeneous learners and to deliver a national curriculum statement that is monitored using a limited set of measures. In this context, the teacher-centred modality is a logical outcome. It allows teachers to deliver the curriculum and control a group of heterogeneous learners. The study concludes that the teacher-centred modality is an outcome of the modern organisational arrangement for providing mass education, and in particular schooling. It will persist for as long as this arrangement of schooling is considered an immutable fact.

Keywords: Ostrom, Institutions, Teacher-centred modality, Teaching, Institutional analysis and development framework, Satisficing, Rules-in-use, Institutions-in-use, Rules, Norms, Lesson routines, Incentives, Grammar of schooling, Sanctions, Heterogeneous learners, Overcrowded classes, Classroom interactions, Structured Pedagogy, Classroom management.

DECLARATION

I declare that this thesis is my own, unaided work. It is being submitted for the Degree of Doctor of Philosophy at the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination at any other University.



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Shamima Vawda

12th day of June 2025 in Johannesburg

"Designing institutions to force (or nudge) entirely self-interested individuals to achieve better outcomes has been the major goal posited by policy analysis for governments to accomplish for much of the past half century. Extensive empirical research leads me to argue that instead, a core goal of public policy should be to facilitate the development of institutions that bring out the best in humans". (Elinor Ostrom, Nobel Prize Lecture, 2009)

DEDICATION

In memory of my formidable mother

Rabia Khota

1939 – 2018

And to the samud (steadfastness) of the Palestinian People.

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ABBREVIATIONS

ADICO Attributes, Deontic, Aim, Conditions, Or Else

ANA Annual National Assessments

C2005 Curriculum 2005

CAPS Curriculum and Assessment Policy Statement

CODESRIA Council for the Development of Social Science Research in Africa

COVID-19 Coronavirus Disease of 2019

CWP Community Work Programme

DBE Department of Basic Education

GDE Gauteng Department of Education

IAD Institutional Analysis and Development

IGT Institutional Grammar Tool

LoLT Language of Learning and Teaching

LTSM Learning and Teaching Support Material

NDoE National Department of Education

NEPA 1996 National Education Policy Act 27 of 1996

NSLA National Strategy for Learner Attainment

NSNP National School Nutrition Programme

PEI President's Education Initiative

RCTs Randomised Control Trials

RNCS Revised National Curriculum Statement

RSA Republic of South Africa

SACE South African Council for Educators

SADTU South African Democratic Teachers Union

SASA, 1996 South African Schools Act 84 of 1996

USA United States of America

CHAPTER 1: INTRODUCTION

The purpose of the study is to make an original contribution to the literature on the persistence of the teacher-centred modality in South African public primary schools. It does this by applying the institutional analysis and development (IAD) framework developed by Elinor Ostrom to explore the structural variables that primary school teachers believe incentivise them to choose the teacher-centred modality.

This introductory chapter is organised into five sections. The chapter begins with the background of and context to the study. Section two presents the research problem followed by the research questions of the study in section three. The rationale for the research is discussed in section four. Section five offers a brief outline of each of the remaining seven chapters in the thesis.

1.1 Background and Context

The teacher-centred modality dominant during apartheid in public primary schools remains persistent in South African public primary schools (Hoadley, 2018) notwithstanding the amendments of legislation to change how teachers teach. It required learners to be passive in the lesson and promoted rote-learning. It was exam-driven, teachers were responsible for learning and motivation depended on the teachers' personality and what teachers hoped to achieve (National Department of Education (NDoE), 1997). Furthermore, there were different curricula for learners at racially segregated schools. These curricula were broken down into subjects. Each subject had a list of content that teachers had to deliver in a prescribed time (NDoE, 1997).

In 1994 the Republic of South Africa (RSA) became a constitutional democracy. The newly-established NDoE immediately set about transforming the fragmented apartheid education system into a single national education system underpinned by democratic principles.[1] The

1 During apartheid there were nineteen education departments for each racial and ethnic group in the country. They were tightly controlled by the apartheid state (Morrow, 1990) and were allocated unequal resources including physical school infrastructure and environment, learning and teaching support materials and limited powers to formulate and monitor legislation and related regulations. By the time apartheid ended there were separate

new education system intended to redress the unequal outcomes of the apartheid education system and offer equal educational opportunities to all citizens of the country. The first act the NDoE promulgated was the National Education Policy Act 27 of 1996 (NEPA 1996) (RSA, 1996a). The NEPA 1996 gave the newly-established NDoE the authority to promulgate legislation and regulations prescribing a new national education system. It allowed the NDoE to promulgate the South African Schools Act 84 of 1996 (SASA, 1996) (RSA, 1996b) to establish a single unified school system. SASA, 1996 allowed for related matters such as changing funding formulae based on learner: teacher ratios and not on the basis of race; introducing the national school nutrition programme; no-fee public schools in poor communities to alleviate the impact of poverty on learners' opportunities to access education and learning; establishing the learner: teacher ratio for classes; setting a national curriculum statement; regulating how teachers relate to learners and assigning the responsibility of the governance of public schools to the school governing body.

The post-apartheid democratic state made four assumptions about teaching in the formulation of legislation to effect change in how teachers teach. The first assumption was that the choice of curriculum influences how teachers teach. The second assumption was that how teachers teach affected measured learner performance. The third assumption was that the hierarchical bureaucratic organisational form of the modern school system enables efficient implementation of policies and associated legislation. The fourth assumption was that the age-graded classes with a single teacher was an efficient organisational form to facilitate learning for all learners. Among other contextual variables that may influence teachers' choice of teaching modality, these assumptions preclude the influence of teachers' values and beliefs, decision-making processes, heterogeneity of learners in a class, and culture, norms and history of schools and communities.

Consequently, in the first two decades of the democratic dispensation, the NDoE and later the Department of Basic Education (DBE) used the national curriculum as the mechanism to improve teaching and measured learner performance. It introduced legislation to structure the national curriculum to incentivise teachers to shift from the teacher-centred modality dominant during apartheid, which was considered authoritarian and inefficient (NDoE, 1997; Chisholm, 2012). The new legislation incentivised teachers to choose teaching modalities that are consistent with the values and principles of the Constitution of the Republic of South

education departments for each of the 'national groups', namely, White, Indian, Coloured, African and each Bantustan had its own education department.

Africa, Act 108 of 1996 (RSA, 1996). Additionally, to improve the performance of the public primary school system (NDoE, 1997). It did not change legislation structuring the rational bureaucratic organisational form of schooling, namely the graded classes with single teachers and the school day divided into periods that characterise modern schooling (Tyack & Tobin, 1994). Rather, it strengthened the hierarchical management approach that underpins the rational bureaucratic organisational form of the school system. It introduced education districts in the unified post-apartheid school system to oversee policy implementation. Education districts were granted substantial authority to monitor and support implementation of the new legislation that prescribed what and how teachers teach and relate to learners (DBE, 2013, amended 2018).

The changes to the legislation prescribing what and how teachers should teach and how they should relate to learners are presented in the respective subsections below. These subsections offer background and context to the study.

1.1.1 Legislation on What and How Teachers Teach

Immediately after the first democratic elections in 1994, the newly-elected government began the process of curriculum revision. It did this in two phases: the short-term intervention was cleansing the apartheid curriculum of its racist and sexist elements (Chisholm, 2003); followed by comprehensive national consultative processes for the formulation of a new curriculum. The formulation of a new curriculum was part of the broader project of redressing and transforming South African society. Centuries of colonial and decades of apartheid legislation excluded most of its people from citizenship, quality education and training and work opportunities (Chisholm, 2003; Crouch, 1996; Hugo, 2020). This process led to the promulgation of Curriculum 2005 (C2005) in 1997 which was expected to be fully implemented across all school grades by 2005.

C2005 encompassed a radical transformation of the apartheid school curricula. It adhered to the progressive principles underpinning the 1996 Constitution including redress, equity and development. In accordance with these principles, curriculum encompasses “everything that influences a learner, from the teachers and the work programmes, right down to the physical buildings” (NDoE, 1997, p. 10). It is not a syllabus with a list of content to be delivered, instead, it focusses on learners attaining prescribed learning outcomes. C2005 obligated teachers to deliver the curriculum through outcomes-based learning programmes. It required them to integrate knowledge instead of teaching by subjects, to connect to real-life situations and to be innovative and creative rather than strictly following the textbook. C2005 did not

prescribe the pace at which learners should attain prescribed learning outcomes. Teachers were obligated to conduct continuous assessment of learners to determine their progress to attaining prescribed learning outcomes. They were prohibited from measuring learners' performance against narrow content and assigning marks. Furthermore, C2005 obligated teachers to adopt 'learner-centred' modality. While C2005 did not define learner-centred modality, it encouraged teachers to choose activities in a lesson that permitted learners to interact with one another such as working in groups and teams (NDoE, 1997).

The ministerial committee established in 2000 to review C2005 found that teachers across the country struggled immensely to comply with the prescriptions of C2005 (Chisholm et al., 2000). The committee identified numerous variables that affected its implementation, including inadequate orientation, training and development of teachers; shortages of personnel and resources to implement and support implementation and lack of alignment between the curriculum and the assessment policy. The committee noted that teachers generally supported the spirit of C2005 but it did not explore whether it was congruent with how teachers viewed teaching and what influenced their behaviour in a lesson. These omissions were significant because there was evidence in the literature that teachers' beliefs and the norms about learning and teaching influence their choice of teaching modality (Fang, 1996; Lortie, 1967) as well as affect how they implement policies (Berman & McLaughlin, 1975, 1977, 1978; McLaughlin, 1987; Weatherly & Lipsky, 1977). Research at the time also highlighted that teachers' choice of teaching modalities is influenced by contextual variables including where they teach, how they think about their learners and the legislation governing teaching (Duffy & Anderson, 1984; Jansen, 1999; Talbert & McLaughlin, 1992). More recently Sabarwal et al. (2022) show that teachers' beliefs impact policy implementation and learners' measured performance. Hwa (2023, p.7) argues that teachers' norms is an outcome of individual teacher beliefs and collective frames of meaning and suggests "good policy design is intertwined with teachers' beliefs."

Furthermore, the committee reviewing C2005 did not examine whether the existing organisation of schooling or what Tyack and Tobin (1994) refer to as the "grammar of schooling" was appropriate for achieving the goals of C2005, regarded as part of the broader transformation of South African society. A major weakness of the committee's mandate and final report is its silence on how teachers viewed teaching and the opportunities and constraints that they believe they face in teaching, and how these influence their behaviour in a lesson. Consequently, the ministerial C2005 review committee's main recommendations

were limited to streamlining C2005 (Chisholm et al., 2000) and resourcing to support implementation of the next iteration of the national curriculum. The recommendation to streamline C2005 required the next iteration to be more prescriptive and to reduce teachers' discretion to determine what to teach and assess.

In 2002, C2005 was replaced by the Revised National Curriculum Statement (RNCS) Grades R-9, and in 2005 by the National Curriculum Statement Grades 10-12. The RNCS replaced critical outcomes with learning area statements which prescribe the minimum knowledge and skills learners must attain in each grade, rather than by education phase and level and the amount of time teachers spent per learning programme in an academic day (NDoE, 2002).[2] This iteration signalled a significant shift from C2005; it obligated teachers to comply with the pace of curriculum delivery set by RNCS and not by individual learners' pace of learning. It strengthened the "grammar of schooling" - single teachers teaching grades and complying with the sequence and pace of curriculum delivery per grade. The RNCS was silent on the teaching modality. Rather, it promoted the seven roles of a teacher prescribed in the policy on norms and standards for educators (NDoE, 2000).[3]

Concomitantly, the NDoE introduced the National Strategy for Learner Attainment (NSLA) in 2004 as an accountability measure. The NSLA monitors learner performance per grade per school through the annual national assessments (ANA) to identify underperforming schools that require education districts and provinces to offer the necessary developmental support (Cornelissen and Smith, 2022). While the NSLA requires education districts to set targets and provide adequate support to schools that do not meet them, it does not include sanctions for schools that are noncompliant. The South African Democratic Teacher Union (SADTU), during the negotiations of the NSLA strategy formation argued that it is unfair for schools to be sanctioned for underperformance (Ehren et al., 2020; Letseka et al., 2012). SADTU argued that in the context of poor schools, dysfunctional schools and inadequate support from education districts to comply with legislation requiring high levels of teacher competencies, the state should focus on the development of teachers rather than bureaucratic accountability measures such as measured learner performance (de Clercq, 2008).

[2] The national qualifications framework set the first level at Grade 7 – the exit level for compulsory schooling. The NDoE organised basic schooling into grades and three phases – foundation, intermediate and senior phases.

[3] The norms and standards for educators obligate teachers to perform and be competent in the roles of learning mediator; interpreter and designer of learning programmes and materials; leader, administrator and manager; scholar, researcher and lifelong learner; community, citizenship and pastoral care; assessor and learning area/subject/discipline/phase specialist (NDoE, 2000, 2002).

By 2008, there was growing evidence that measured learner performance was not improving across all schools (van der Berg, 2008). One of the variables identified for the underperformance of learners in poor public primary schools was the slow pace of curriculum delivery (Taylor, 2008). In response, the NDoE (2008) gazetted the four-year Foundations of Learning campaign. The campaign prescribed the activities (which I refer to as actions in this study) that teachers should implement in a lesson, the sequence of the actions and the time allocated for the actions in a lesson for delivering the languages and mathematics curricula in foundation and intermediate phases. The campaign assumed that routinising teachers' lessons would serve as a mechanism to enable teachers to comply with the prescribed pace of curriculum delivery. In the case of mathematics in intermediate phase, for example, it obligated teachers to follow a lesson routine comprising five actions implemented in sequence, namely, teachers must: do oral and mental work, followed by reviewing and correcting homework from the previous day, introducing the concept of the day's lesson on the chalkboard, assigning problem solving activities (which I refer to as learning tasks in this study) for learners to complete through group or pair work and allocating learning tasks for homework and explaining these. These obligations promoted a teaching modality based on routinising lessons. Teachers were required to follow a specific sequence of actions which I refer to as an action-sequence lesson routine in this study. Kanjee and Sayed (2013, p. 375) describe these prescriptions as strategies for becoming "almost teacher-proof." Put differently, the Foundations of Learning campaign tightened control over how teachers teach.

The fourth and current iteration of curriculum reform, the Curriculum and Assessment Policy Statement (CAPS), was enacted in 2011. It is influenced by the 2008 - 2011 Foundations of Learning campaign, and is therefore more prescriptive. It obligates teachers to teach by subject. It prescribes the sequence of content, pace of curriculum delivery, the number of learning tasks teachers must assign to learners for each topic and number of assessments teachers must conduct for each subject in a term. Furthermore, it obligates teachers to keep a teaching file to record learner performance, include their annual teaching plan and the remedial actions they implement for learners who are under-performing.

Since the publication of the CAPS, provincial departments of education have provided their teachers with annual teaching plans that include individual lesson plans as well as templates for teachers to use to create lesson plans. These lesson plans serve as scripts for teachers to follow in a lesson – the actions they will take in a lesson, sequence of actions, allocation of time for actions and learning tasks they will assign to learners. These scripted lessons are an

element of structured pedagogy programmes implemented in low- and medium-income countries to improve measured learner performance in reading (Hoadley, 2024). The scripted lessons are the mechanism for changing teachers' choice of teaching modality (Cilliers et al., 2018; Fleisch, 2018; Fleisch & Dixon, 2019). This notion is bolstered by the publication of the DBE workbooks for languages and mathematics in primary schools, with each page containing learning tasks that can be completed as a lesson, ostensibly to enable teachers to cover curriculum content at the prescribed pace. The CAPS, together with the DBE workbooks and scripted lessons, prescribe an action-sequence teaching modality.

In addition, the RNCS review task team recommended that the next curriculum iteration should promote the useful role and benefits of textbooks (Dada et al., 2009). With the introduction of the CAPS the DBE was legally challenged in 2012, 2013 and 2014 to provide every learner with a textbook for each subject. The court judgements in favour of learners' entitlement to textbooks made access to textbooks an integral part of the right to basic education (Stein, 2017). The DBE's 2014 draft policy on learning and teaching support material (LTSM) includes textbooks as part of the set of core resources.

Concomitantly, since 1994 the state initiated and supported large-scale school change interventions to enable teachers and schools to comply with the promulgation of new legislation structuring the unified school system, and amendments to legislation including the national curriculum statement and how they should relate to learners. It garnered significant resources from local and international donors to support these change interventions. Local and international donors brought with them the need to show impact of these large-scale interventions. Consequently, the research agenda privileged randomised control trials (RCTs) and a focus on discrete variables identified in school effectiveness research that affected measured learner performance. This, in turn, spurred educationalists to search for discrete variables that affect teaching and measured learner performance in poor schools, and to manipulate these in search of an optimal teaching modality that is context-free. Furthermore, at the time, one of the salient variables identified in research on teaching and learning was teachers' lack of subject content knowledge and lack of professionalism (Hoadley, 2003; Taylor & Vinjevold, 1999). As a result, the studies in search of an optimal pedagogy assume that all poor schools are homogeneous and that there is a set of variables that can be manipulated to formulate an optimal pedagogy that is teacher-proof – a "one size fits all" pedagogy for poor schools. Moreover, these studies assume that teachers will implement this optimal pedagogy with fidelity. This assumption was informed by two views of

implementation. The first view was that the command-and-control management approach will ensure teachers comply with the prescriptions. The second view was that teachers are rational and will see the value of the pedagogy or what Elmore (1996, p. 10) refers to as "good ideas would travel, of their own volition."

Hugo and Wedekind (2013), similarly criticise the use Bernstein's theory that explores optimum pedagogy for working class children in developed contexts to education systems in developing contexts. They agree that Bernstein's theory offers a rigor to studying classroom practices and teaching modalities, but they contend that it struggles with absences such as whether there is any teaching going on in developing contexts. In other words, researchers assume that there is a pedagogy in poor schools without establishing what it is which they refer to as the "presence of pedagogy fallacy" (p.150). Hugo and Wedekind (2013) suggest that a researcher searching for:

> an optimal pedagogy for the disadvantaged needs to work firstly with the establishment of the presence of pedagogy and secondly with an increasing ability of the system to work with variations of pedagogy, depending on what the context and conditions demand. (p. 155)

However, Hugo and Wedekind (2013) fall into the same trap as the researchers they criticise in that they do not ask a more fundamental question – what incentivises teachers to choose a teaching modality that does not facilitate learning.

1.1.2 Legislation on How Teachers Relate to Learners

The NEPA 1996 (RSA, 1996a) and SASA 1996 (RSA, 1996b) abolished the use of corporal punishment in schools. Chapter three of the SASA, 1996 provides that no person may administer corporal punishment at a school to a leamer, and that "any person convicted of such a transgression may be sentenced for assault" (section 10).

The SASA 1996 was amended in 1999, 2002, 2005, 2007 and 2011. These amendments aimed to tighten the regulations prescribing learners' behaviour in schools and related sanctions for noncompliance in response to the increasing instances of antisocial behaviour by learners in public schools. The new regulations provide schools with additional powers to promote their preferred code of conduct and include actions such as random search and seizures and drug testing in schools. Concurrently, they prohibit schools from taking irrational decisions and victimising learners, while obligating schools to protect learners' rights to due process and learning.

In summary, the two decades of changing legislation prescribing what and how teachers teach and how they relate to learners require teachers to apply an action-sequence lesson routine to deliver a list of curriculum content at the prescribed pace and ensure that learners' right to education and due process are protected. The change in legislation also encourages teachers to use textbooks and DBE workbooks and scripted lesson plans to deliver curriculum content. This action-sequence teaching modality centres on enabling teachers to cover the prescribed curriculum content at the prescribed pace but does not emphasise learning by learners. The absence of sanctions in NSLA for schools not meeting targets set for measured learner performance further reduces teachers' obligation to focus on learning. However, the amendments to the legislation were not informed by teachers' perceptions of the opportunities and constraints that they believe they face in teaching and that influence them to collectively choose a teacher-centred modality; neither was it informed by what the dominant or typical teacher-centred modality is. These are the two research problems that this study intends to address. The next section elaborates on the research problems.

1.2 Research Problem

The privileging of RCTs and searching for an optimal pedagogy in post-apartheid education research resulted in South African researchers designing studies using the process-product approach. In the process-product paradigm researchers explore the relationship between a few generalisable dimensions of teacher behaviour and measured learner performance (Doyle, 1977). These studies use classroom observations to observe how teachers behave in a lesson against a set of predetermined 'pedagogical' indicators that excludes observing the behaviour of learners and the context of the classroom. They then attempt to make a causal link between their assessment of teachers' behaviour and measured learner performance. The studies conducted by Reeves (2005), Taylor (2010) and Carnoy et al. (2012) are typical of the latter studies. Furthermore, these process-product studies often examine how teachers teach a specific subject or topic in a particular grade.

Hoadley and Ensor (2004), after reviewing 18 instruments used to collect data on how teachers teach in South Africa, found that these were in the main influenced by normative views of teaching:

> largely normative in that researchers entered the field with strong views about what constituted good teaching practice. Because of this, these instruments would be unable

> to capture information about what teachers might have been doing that fell outside of these categories. (p. 86)

There is recognition that observing quality of teaching is expensive (labour-intensive) and there are difficulties with inter-observer comparability (Schweisfurth, 2023). Consequently, researchers at the World Bank developed a classroom observation instrument that they contend captures quality of interactions between teachers and learners in the classroom and addresses these challenges (Molina et al., 2018). The instrument referred to as TEACH captures time on task, classroom culture, instruction and socioemotional skills through 28 items which the observer ranks from 1 to 5. However, Schweisfurth (2023) argues that the instrument decontextualises the measure of quality teaching. Furthermore, Schweisfurth (2023) contends that the 28 items were based normative views of teaching from research conducted in higher-income contexts.

Other studies that use classroom observation techniques use it to explore how single variables influence teachers' behaviour in a lesson. They include studies that explore how teachers use LTSM (Koornof, 2017; Leshota and Adler, 2014; Pile & Smyth, undated; Stoffles, 2005) or how scripted lessons affect how teachers teach (Fleisch & Dixon, 2019; Hoadley, 2024).

The top-down approach prevalent in South African research on how teachers teach has produced three gaps in the literature. The first gap is that studies do not explore all the actions that teachers take in a lesson and the interactions these generate between learners, the learners and the teacher and learners and LTSM. Additionally, these studies do not explore how teachers teach across educational phases, grades and subjects to determine whether there is a pattern of classroom interactions and what it is. The second gap is that studies generally do not take a teachers' perspective; in other words, they do not explore the incentives teachers face that influence their choice of teaching modality. The third gap concerns studies mainly exploring single variables at a time and, in doing so, assume that variables act in an additive manner rather than in configuration.

As a result of the above three gaps in the literature on how teachers teach in South Africa, there are rich descriptions of the dominant behaviour of teachers in South African public primary schools but no description of what the form of the typical teaching modality is and why teachers choose this modality over others in light of the various curriculum iterations. In other words, what are the actions that teachers take to give form to a lesson (Alexander, 2004; Haberman, 1991). Hoadley (2006), for example, observed that teachers in poor schools do not make the evaluative criteria explicit to learners so that learners know what is considered as

legitimate knowledge. She introduced the concept of F^0 and argues that F^0 is not an indication of an absence of pedagogy but rather it "is a form of pedagogy (or non-pedagogy) not uncommon in schools in South Africa" (p.11).[4] This prompted Hugo and Wedekind (2013) to raise the question as to whether there is a pedagogy in poor public primary schools, rather than what is the typical teaching modality and why? As such, there is no description of the form of the typical teaching modality in South African public primary schools but characteristics of teachers' dominant behaviour in a lesson. Hoadley (2018, p.13) describes this behaviour as 'traditional' pedagogy ubiquitous in developing countries that is: "teacher-dominated and lecture-driven instruction where 'chalk and talk' predominates. The pedagogy places students in a passive role and limits their activity to memorizing facts and reciting them back to the teacher."

Hoadley (2003, 2006, 2017, 2018) uses Bernstein's pedagogic device to explore and describe the characteristics of the dominant teaching modality.[5] In 2003, for example she explored the external framing (control) on pacing curriculum delivery in two schools – one located in a poor community and the other in a wealthier community. She posits that teachers' pace of curriculum delivery may be influenced by external framing – the influence of parents on teachers' behaviour in the class. Parents in the wealthier school exert more influence on teachers' behaviour in the class than their counterparts in the poor school. She tentatively concludes that teachers' behaviour may be influenced by exogenous variables such as parents' power. However, in her later work she does not interrogate how the pedagogic device influence teachers' choices in a lesson – the legislation prescribing the three rules in the pedagogic device. As such, Hoadley and other educational researchers do not consider teaching as structured social classroom interaction. Nonetheless, it is noteworthy that Hoadley (2018) does acknowledge the pedagogic device as the "pedagogic 'grammar'" – the rules that structure teachers' choice of teaching modality:

> The pedagogic device is not a thing, but rather, like grammar, it is a set of rules that operates in the background, generative of particular processes and forms, in this case the process of knowledge becoming pedagogic communication. These processes and

[4] "F^0 - It appears as if no attempt is made to transmit the concepts and principles in the instructional practice. What counts as a successful production in terms of instructional knowledge is therefore totally unclear. The purpose of the task/activity/discussion is unclear. Learners are unclear as to how to proceed, or they are only given criteria relating to how they should behave" (Hoadley, 2006, p.11).

[5] The pedagogic device consists of the hierarchical rule, sequencing and pacing rule and the evaluative criteria rule.

> hence the device are social and political, and historically located. The device offers a way of describing the ways in which broader social norms or the moral order established by the state, the economy and the political arena as well as the field of education itself, inform decisions around what knowledge is to be distributed, to whom and how. (p. 72)

The reason educational researchers in South Africa do not consider teaching as structured social interaction between the teacher and learners in a lesson, or ask why teachers continue to choose a teacher-centred modality, may be inadvertent outcomes of the intersection of two processes. Firstly, the president's education initiative (PEI) report identified five main "issues" affecting teaching and learning, namely: conditions in schools for enabling substantive learning and teaching opportunities, attitudes of teachers, teachers' conceptual knowledge, classroom practices and learner learning (Taylor & Vinjevold, 1999). These salient variables set the agenda for both research and school change interventions in South Africa for the two decades following its publication.

Secondly, policy borrowing from Anglo-American countries implementing large-scale school change intervention, particularly from Canada, England and the United State of America (USA) at the time of South Africa's transition to democracy. The large-scale school change interventions in Anglo-American countries manipulated a few generalisable variables of teachers' behaviour that emerged from school effectiveness research. They took a top-down approach that increased control over what and how teachers teach (Gracia-Huidobro et al., 2017). While the post-apartheid government had a more expansive goal for the transformation of the school system, they drew on the works of Anglo-American education change researchers such as David Hopkins, Richard Elmore and Michael Fullan, among others. These researchers promoted school change interventions and their attendant RCTs that are based on the process-product paradigm which, at its extreme, takes the form of "a set of process-product laws that are context-proof, teacher-proof, and even student-proof" (Doyle, 1977, p.169).

The two processes discussed above emphasise a small set of variables even though local and international evidence points to teaching as a complex endeavour affected by various variables acting in configuration (Alexander, 2005; De Clercq & Shalem, 2021; Hwa, 2023; Schweisfurth, 2023; Talbert & McLaughlin, 1992; Taylor & Vinjevold, 1999). These processes incentivise local studies to examine how changes to single variables from the set affect how teachers teach. As a result, there are no studies that explore what the form of the

typical teaching modality is, take a teachers' perspective to understand and identify the structural variables that influence their choice of teaching modality and how these structural variables act in configuration to incentivise teachers to choose the teacher-centred modality. The next section presents the research questions for the study that intends to fill these gaps in the literature.

1.3 Research Questions

The study intends to make a unique contribution to the literature on the persistence of the teacher-centred modality in South African public primary schools by answering two research questions to address the gaps discussed in the previous section. These are:

1. What is the form of the typical teaching modality in public primary schools?
2. What explains the persistence of the form of the typical teaching modality?

To operationalise the two research questions, the study collected two sets of data and conducted two levels of analysis. The first set of data was obtained through observing multiple lessons across grades and subjects in a cross section of schools in a single education district. The lesson observations yielded data on all the actions teachers took in a lesson, the interactions the actions generated between learners, between learners and the teacher and between learners and LTSM and the observable outputs these interactions produced. The data was analysed to identify any regularised pattern of classroom interactions in a lesson, and to describe it.

The second set of data was obtained through interviewing teachers about their views of teaching and the opportunities and constraints that they believe they face in a lesson that influence their choice of teaching modality. The data was analysed to identify the variables that teachers believe influence their choice of teaching modality.

The two levels of analysis provide a description of the form of the typical teaching modality and identifies the variables that incentivise teachers to choose actions that produces it. In doing so, the study sheds light on the reasons for the persistence of the teacher-centred modality.

The next section discusses the rationale for the study.

1.4 Rationale for the Study

The previous section identified three gaps in the literature on teaching modality in public primary schools in South Africa. This section provides the rationale for addressing these gaps in the subsections below. In addition, the study extends the application of the IAD framework to the teaching situation: it has not been previously applied to the teaching situation. In doing so, the study intends also to contribute to the growing literature on structured regularised social interactions in diverse settings.

1.4.1 Exploring Teaching Modality as Structured Regularised Classroom Interactions

Recent studies exploring teaching modalities and measured learner performance in South African classrooms seem to imply that the teacher-centred modality dominant in public primary schools may be an outcome of structural variables.

The Carnoy et al. (2012) 'natural experiment' study,[6] for example, which explores why lower income learners in South Africa are learning less than their counterparts in Botswana, found that teacher quality may be one of the variables contributing to the difference. Teacher quality was measured by teachers' mathematical knowledge and proficiency in mathematics and the degree of curriculum coverage in an academic year. While the report recommends improvement of teacher quality as a means to improve learning outcomes, the authors draw the following caution:

> However, while the steps may be evident [improving teacher quality], taking them in the South African political and social context may be exceedingly difficult, *since they will require changing a now deeply ingrained culture of inefficiency in producing learner achievement* [added emphasis]. Most schools in the South African educational system have, plainly and simply, organised themselves to produce something that is not student achievement. That suggests that our recommendations, evident as they may be to most reformers, represent more than just showing teachers and principals how to improve their effectiveness – *it may require changing the underlying production mix of the system away from serving teachers to making students academically competent* [added emphasis]. (Carnoy et al., 2012, p. 158)

[6] The study measured learner achievement gains in Grade 6 mathematics over seven months, learner characteristics, the quality of teaching mathematics that looked at the mathematics the teacher made available to learners, curriculum coverage or opportunities to learn mathematics, available resources and teacher characteristics in two adjacent border schools in Botswana and South Africa.

Carnoy et al. (2012) in the caution above appear to suggest that there is a combination of variables in the education production function that creates the "deeply ingrained culture" that produces the "low achievement trap" South African primary schools face. However, they do not specify the production function, nor do they describe the deeply ingrained culture. Furthermore, they do not offer a means of exploring what underpins the "deeply ingrained culture."

In a similar vein, Muller and Hoadley (2019) believe the persistence of the teacher-centred modality in South African public schools which they refer to as communalising pedagogy is an outcome of "shared values and practices, cemented by consensual classroom rituals that foreclose on individualisation" (p. 122). Muller and Hoadley (2019) also do not specify what these "shared values and practices" are, their origins and how to identify them. Hoadley (2003, p. 269) tentatively suggests that is may be "social cohesion based on 'common faith' (Durkheim, 1933)" that produces weak external framing.

Shalem and Hoadley (2009) indirectly posit that teachers' choice of teaching modality is influenced by contextual (exogenous) variables. They argue that teachers in poor communities face four constraints, namely learners who are not cognitively well-prepared for schooling, are not physically healthy and whose homes do not serve as second sites of learning; their schools do not have cognitive capital; have a curriculum that is not well-specified to guide teachers deliver and do not have functional school management that mediates the bureaucratic demands on their time. They believe that these constraints create the "teachers' low morale" that influences teachers' work.

By contrast as discussed in the background and context section, Taylor and Vinjevold (1999) identify "attitudes of teachers" as one of five "issues" inferred from the 35 studies conducted under the PEI that affect teaching and learning. They use "attitudes of teachers" as a generalisable variable that captures the following behaviour: teachers not taking responsibility for learner welfare and outcomes and blaming learner characteristics and other exogenous variables for weak learner performance instead of reflecting on their own teaching (Taylor & Vinjevold, 1999). Consequently, Taylor and Vinjevold (1999) in the influential PEI report did not recommend exploring "attitudes of teachers" as an outcome of structural variables.

The terms "ingrained culture", "production mix of the system", "teachers' low morale" and "shared values and practices" implies that educational researchers studying teaching modalities in public primary schools in South Africa recognise that teachers' choice of

teaching modality may be influenced by a set of structural variables but they do not have a language and theory to describe and explain it. Hugo (2020) asks these difficult questions:

> How do we make sense of this massive change from a dictatorial apartheid education system, to a radical outcomes-based education, to this current tight specification of what must be taught each day? How do we develop an analytical language that does not fall into the ideological trap of taking some stereotype of pedagogy as the gold standard but, at the same time, also develop an analytical language that has a real ability to make a difference in the lives of teachers and learners trying to overcome centuries of discrimination? And on top of all that, how [to] develop an analytical language that allows a fair and detailed examination of all the pedagogic changes in South African education over 20 years? (p. 116)

Ostrom's (1983, 1986, 2005, 2007, 2011) work on regularised social interactions such as pedagogy offers a metatheoretical language to explore and describe them, and a conjecture about how they are created. She posits that there is universal building blocks used to create such structured situations. These building blocks are underpinned by rules akin to how genes combine to build the phenotype (Ostrom, 2005). She refers to structured regularised social interactions as institutions and defines them as:

> the prescriptions that humans use to organize all forms of repetitive and structured interactions including those within families, neighborhoods, markets, firms, sports leagues, churches, private associations, and governments at all scales. Individuals interacting within rule-structured situations face choices regarding the actions and strategies they take, leading to consequences for themselves and for others (Ostrom, 2005, p.3).

Tyack and Tobin's (1994) seminal paper that coined the phrase "the grammar of schooling" appear to suggest that the organisational form of modern schooling is an institution. They identify the legislation that underpins modern schooling that is now part of society's tacit knowledge of what schooling is. They argue that the latter prescriptions are taken as facts which may explain the persistence of the grammar of schooling even though it may not be appropriate for learners whose backgrounds do not match their demands.

Ostrom (2005) takes a less deterministic position and postulates that like genes, rules do not fully determine the behaviour of humans; human behaviour is influenced by a plethora of variables including agency.

This study draws on Ostrom's (1983, 1986, 2005, 2007, 2011) notion of institutions and assumes that the teacher-centred modality dominant in public primary schools is an institution – it is structured regularised classroom interaction. It is structured by contextual variables including shared rules and norms. The structure creates the opportunities and constraints that teachers believe they face in teaching; in turn, this influences their choice of actions in a lesson that produce the teacher-centred modality.

Treating the teacher-centred modality dominant in public primary schools as an institution will offer an alternative approach to studying the persistence of the teacher-centred modality. It allows for identifying the variables that teachers believe structure the teaching situation and that incentivises them to choose the teacher-centred modality over others. Identifying these variables will provide insights on how teachers perceive the structure of the teaching situation. Understanding how teachers believe the structure of the teaching action situation is created can assist with helping teachers to critically reflect on their choice of teaching modality.

The notion of the teacher-centred modality as an institution structured by rules is not new in education research. Studies conducted in the early 1970's in the USA drew attention to institutionalised practices. These studies were conducted at the time of changing legislation and associated large-scale school change interventions to improve schooling outcomes in response to the "space race" (Herold, 1974). They drew on institutional theory from sociology and organisational management to explore the persistence of practices in schools,[7] and the education setting (Burch, 2007; Dacin et al., 2002; Meyer & Rowan, 1977; Puttick, 2017; Spillane et al., 2002; Scott, 2004).[8] However, these studies used terms such as rules, myths, norms, contexts, rule-like, and culture interchangeably without offering precise definitions to explain the persistence of practices. As a result, the various explanations emerging from the studies could not be compared and advanced. Nonetheless, the zeitgeist of the time was such that it was not possible to "mandate what matters" (McLaughlin, 1987, p. 172) in schooling. Put differently, legislation (policy prescriptions) on its own would not change practices. The capacity and capability of schools and their contexts (Berman and McLaughlin, 1977, 1978),

[7] Institutional theory offers a means to explore persistence and homogeneity of phenomena (Dacin, Goodstein and Scott, 2002). According to Scott (2004) institutional theory "considers the processes by which structures, including schemas, rules, norms, and routines, become established as authoritative guidelines for social behavior. It inquires into how these elements are created, diffused, adopted, and adapted over space and time; and how they fall into decline and disuse (p. 2)".

[8] I refer to the education setting in a similar way that Bourdieu describes social fields (Hilgers and Mangez, 2015) and what Bernstein calls action arenas (Bernstein and Solomon, 1999).

discretionary powers of ‘street level bureaucrats’ for interpreting and implementing policy (Weatherley and Lipsky, 1977) and “loose coupling” in rational bureaucratic organisational forms (Weick, 1976; Hautala et al., 2018) impacted how they implement various policies. These findings raised questions about the validity of institutional theory in explaining the differentiation in policy implementation, the role of participants and their agency, local contextual variables in policy implementation and the technical core and management being loosely coupled in rational bureaucratic organisational form (Burch, 2007; Dacin et al., 2002; Puttick, 2017; Scott, 2004; Spillane et al., 2002). This body of research underscores that teachers’ agency and their discretionary powers together with loosely coupled systems affect how they interpret and implement policy, and that it is important to understand what incentivises teachers’ behaviour. However, there is a paucity of studies from a teachers’ perspective endeavouring to understand what influences their choice of teaching modality. This is the second hiatus in the literature that this study intends to address, and it is discussed in the next subsection.

1.4.2 Exploring Teaching from a Teachers’ Perspective

The few studies conducted in South Africa that consider teachers’ views about the variables that affect their teaching and how they view their professionalism reveal two salient variables, namely: large class sizes and the heterogeneity of learners, especially with respect to their diverse socioeconomic backgrounds (Ewing & Setsubi, 1998; Hoffman et al., 2016; Roux, 2020).

The Ewing and Setsubi (1998) study is unique in that they ask both teachers and learners about the variables they believe affect teaching and learning respectively. Teachers listed that the main obstacles to teaching are the lack of resources followed by large class sizes or high learners: teacher ratios and the heterogeneity of learners especially in behaviour and socioeconomic backgrounds. Learners report that the behaviour of fellow learners is an obstacle to learning, namely “noise/bad behaviour.” The study also found that learners identified violence in the community they live in as an obstacle to learning, for example an 18 year old female learner in Grade 7 explained the reasons for her slow progress: "the first thing [difficulty] is the killing of my parents in 1994 and then the burning of my home ... These problems are disturbing me when I am learning at school" (Ewing & Setsubi, 1998, p.23).

The Hoffman et al. (2016) study shows a statistically significant relationship between teachers’ views of the obstacles to teaching related to social trauma and teachers’ emphasis on

pastoral care. The authors group together poor behaviour of learners, learners' home backgrounds, socioeconomic problems in the community and community disregard for teachers as social trauma. Hoffman et al. (2016) argue that teachers in no-fee schools tend to stress pastoral care work as central to being a professional compared to those in fee-paying schools who emphasise pedagogical content knowledge and job prestige. They conclude that there may be different "informal rules" that teachers in no-fee schools use to make choices about their professionalism than those in fee-paying schools. The Hoffman et al. (2016) study seems to suggest that there may be different shared rules that teachers in no-fee schools adopt to define their work including choice of teaching modality.

Researchers largely explore the effects of heterogeneity of learners' socioeconomic backgrounds and class size on measured learner performance (Crouch & Mabogoane, 2001; Köhler, 2020; Taylor, 2010; van der Berg, 2008). There are few studies that examine how these two variables influence teachers' choice of teaching modality. Marais (2016), for example, asks student teachers how overcrowded classes affect their teaching. Student teachers reported that they were unable to use a variety of "teaching strategies" and choose teaching modalities that did not encourage learners to be active participants in a lesson. The West and Meier (2020) study centres on establishing the challenges teachers face in teaching in overcrowded classes. They interviewed participants who had experience of teaching in overcrowded classes. They found that overcrowded classes affect teaching in three ways: they cannot offer individual learners the necessary support they need to learn, which they refer to as "didactical neglect",[9] they cannot maintain discipline in the class, and they experience negative teacher attitudes. In response to these difficulties teachers standardise learning content rather than offer learners differentiated learning opportunities. Similarly, the Naude and Meier (2020) study on the effect of large class sizes on learning show that teachers choose whole-class teaching. Their study applied cognitive load theory to explore how large classes affect learning.

However, the studies discussed above focus on teachers' behaviour in overcrowded classes and the resultant teaching modality. They do not specifically explore the classroom as a dynamic environment and ecosystem (Doyle, 2005) and how the interactions between learners and learners and the teacher influence teachers and learners' behaviour in a lesson (Clark & Peterson, 1984). While studies exploring teaching modalities in South African public primary

[9] Didactical neglect refers to "teacher's inability to pay enough attention to each learner's educational needs" (West and Weier, 2020, p. 3).

schools occur in poor schools where classes are overcrowded and learners come from heterogeneous socioeconomic backgrounds, they do not factor in how these variables affect classroom interactions. As discussed in the research problem section, these studies observe specific behaviour of teachers that are determined *a priori* and inadvertently assume learners are "passive" and do not influence teachers' actions in a lesson. Hoadley's (2006) seminal study that analyses pedagogy, for example, only captures the voice of the teacher and learners' responses to teacher's instructions. There is no description of the actions of learners that provoke the teacher to constantly regulate their behaviour. She concludes that "all is about comportment, form, or behaviour" (p.13) but is silent on why teachers make explicit the regulative discourse and not the evaluative criteria.

Research conducted on teacher decision-making in interactive teaching show that teachers' main concern in a lesson is to maintain order to efficiently deliver the curriculum (Clark & Peterson, 1984; Fang, 1996; McNeil, 1982; Shavelson & Stern, 1981). This does not mean as Hoadley (2006, p.14) contends, that there is "*collapse of the instructional discourse into the regulative discourse* [italics in original paper]" but rather there is a single pedagogic discourse (Bernstein, 2003) that teachers choose that allows them to maintain order in the classroom and deliver the curriculum at the prescribed pace.

Consequently, this study intends to take a teachers' perspective and explore the variables that influence their choice of actions in a lesson. It also intends to observe all the actions teachers choose in a lesson and the interactions these actions generate and the outputs these interactions produce. The next subsection discusses exploring teaching modality as complexity, which is teaching is influenced by various variables acting in configuration.

1.4.3 Exploring Teaching Modality as Complexity

Educational researchers in South Africa recognise that teaching is a complex situation, affected by multiple variables that act in configuration (De Clercq & Shalem, 2021; Hugo & Wedekind, 2013; Shalem & Hoadley, 2009; Taylor & Vinjevold, 1999). It is a relationship between the teacher, a group of learners with heterogeneous preferences for classroom interactions and the curriculum (Bernstein, 2004; Doyle, 1980; Elmore, 2008; McLaughlin and Talbert, 1993); and that it takes place in a nested context (Talbert & McLaughlin, 1992) that is influenced by history of interactions and relationships (Alexander, 2005).[10]

[10] A lesson is nested in the subject department that is nested in the school. The school is part of an education district that is nested in the provincial department of education that is influenced by provincial government goals. The

Cumulatively, the teacher, learners, layered contexts and histories produce a large set of variables that affect teachers' choice of teaching modality.

The PEI report (Taylor and Vinjevold, 1999) discussed earlier that set the agenda for educational research in post-apartheid South Africa attempts to reduce the complexity of teaching to a small set of generalisable variables. The report claims that complexity introduces risks and therefore makes predicting outcomes more uncertain. It argues that by reducing complexity, research will be able to offer practical knowledge that policymakers can apply to advance the transformation of schooling in post-apartheid South Africa. The report justifies the approach by arguing that it is a responsible and accountable practice for educational researchers:

> With this move towards a moderate realist research practice, I believe the educational research community puts itself in a position to reclaim a responsible, accountable, and perhaps indispensable role, not only in an increasingly fragile world seen globally, but in the shared governance of society committed to rational transformation. (Muller, 1999, p. 14)

Reducing the complexity of teaching together with the top-down approach dominant in education research encouraged educational researchers to study the effects of single variables on teaching and learning in a decontextualised manner and to assume that teaching occurs in a static environment. This is contrary to the "moderate realist research practice" or responsible and accountable role when the evidence shows that context matters (Carrim and Shalem, 1999; Christie, 1998; de Clercq and Shalem, 2021; Fleisch and Christie, 2004; Shalem and Hoadley, 2009; Spreen and Vally, 2010) and that in reality (or in the field) outcomes are not as determinate but are more likely stochastic (Ostrom, 2005).

While researchers can choose to decontextualise teaching and assume a static lesson environment, teachers cannot escape the complexity of teaching. They are required to make choices all the time in their diverse contexts. In a lesson, for example, they make decisions about the actions they should or should not take at roughly two-minute intervals (Clark and Lampert, 1986). Furthermore, the consequences of their choices are public - observed by learners. Shavelson and Stern (1981) draw on Simon's (1955) critique of rational choice

provincial department of education is subjected to policies of the national department of education that is influenced by the goals of the national government.

theory that assumes humans are able to make rational decisions.[11] They argue that teachers handle complexity by constructing a simple model of teaching. Within this simplified model teachers can then make "rational decisions":

> in order to handle this complexity, a person constructs a simplified model of the real situation. The teacher, then, behaves rationally with respect to the simplified model of reality constructed. This conception of teachers with "bounded rationality," that is, rational within the constraints of their information-processing capabilities, leads to a modification of the first assumption: Teachers behave reasonably in making judgments and decisions in an uncertain, complex environment.[12] (Shavelson & Stern, 1981, p. 456)

Another inadvertent outcome of the top-down approach is there are no studies in South Africa that specifically explore how teachers deal with the complexity of teaching. Furthermore, the various variables that structure teaching are generally studied under subdisciplines such curriculum studies, pedagogy, classroom management, school management, education change, policy studies, sociology of education, early learning, mathematics education, and similar. Each of the subdisciplines has its own language, making it difficult to build a knowledge base on how teachers deal with complexity.

This study applies the IAD framework that allows for studying complexity by factoring the various variables that may affect teachers' choice of teaching modality. Moreover, it offers a metatheoretical language to build a knowledge base on institutions such as the teacher-centred modality. Additionally, it allows for assuming that humans are fallible but also have agency to learn strategies and formulate rules that will allow them to achieve their goals in their respective contexts which Ostrom (2005, p. 135) describes as persons: "who pursue multiple goals for themselves and others, adopt contextually relevant norms of behaviour, and can learn better strategies in a particular situation over time - particularly if it generates accurate information about key variables."

[11] Simon (1955) argues that it is unlikely for humans to have all the information needed or the cognitive capability to process the consequences of their choices and rank these in order of preferences to make optimal decisions – the assumption underpinning rational choice (Sen, 1977).

[12] The footnote in the original text: "While teachers may act reasonably, this does not necessarily mean that their decisions are optimal with respect to the teacher's goal or someone else's goal."

This study will address the gap in the literature on how teachers deal with complexity by identifying the salient variables that teachers believe significantly affect teaching and how they deal with them.

The next subsection argues the unique contribution this study can make to the body of knowledge on institutions and human behaviour.

1.4.4 Exploring Teaching Modality Through the IAD Framework

In the last two decades the IAD framework has been used to analyse regularised social interactions in diverse situations and settings where two or more participants interact to produce joint outcomes. These include the management of common-pool resources, knowledge commons, transportation, health, non-governmental organisational forms, food, trade, abortion legislation, delivery of club goods, banking, teaching of limit functions at college level among others (Basurto et al., 2010; Bushouse, 2011; Dunlop et al., 2019; Garnett, 2011; Hardy, 2010; Hoffman, 2018; Polski & Ostrom, 1999; Siddiki et al., 2019). It has also been used in laboratory experiments to test models of social-choice and institutions (Ostrom, 2006).

In the education setting the IAD framework has been applied to both empirical and theoretical studies. Bushouse (2011), for example, applies the IAD framework to explore the variation of services of club goods with information asymmetry.[13] She examines day-care centres that have different types of legal status (not-for-profit, private corporation, and public corporation) and their provision of services. Similarly, Richardson (2004) used the IAD framework in a comparative study on how legislation affects performance of selected higher education organisations in the USA and Mexico.

More recently Schophuizen and Kalz (2018) propose using the IAD framework to guide empirical research on open online education in higher education organisations. They consider on-line education as a knowledge commons.

In relation to teaching modality, Garnett (2011) uses the IAD framework to theorise alternative teaching modalities in higher education organisations. He treats knowledge and the classroom as commons, and lecturers and learners are participants or appropriators and producers of knowledge. In this formulation of lectures, he argues that lecturers' work is not

[13] Club goods are goods and services where it is easy to exclude consumers by charging a fee while the consumption of services by one consumer does not deplete the provision for others,

to deliver knowledge but to animate the subject to allow learners and the lecturer to collaborate in learning. As such he argues that there should be a shift in higher education towards a learning-centred modality from the dominant expert-centred modality.

Hardy (2010) uses the IAD framework in combination with the anthropological theory of the didactic to explore learners' and lecturers' perceptions of the knowledge to be learned in the topic "limits of function" in the calculus course in a college in the USA.[14] She looks at the typical learning tasks assigned to teach "limits of functions" which routinely appear in final examinations. She found that when learners were assigned these routine learning tasks, they applied techniques that they were taught to solve these types of problems, but when learners were allocated non routine learning tasks they used mathematical rules and strategies. She concludes that it is not learners who are "unable to behave mathematically; it is that the institution does not provide them with the opportunity to do so" (p. 26). In other words, the choice of learning tasks, textbooks and final examinations emphasise certain mathematical tasks which preference procedural knowledge over conceptual understanding.

The IAD framework has not been applied to teaching, and specifically the structure of teaching as perceived by teachers that incentivise them to continue choosing the teacher-centred modality. This study assumes that the teacher-centred modality is an institution and will apply the IAD framework to understand how teachers view the structure. In doing so, it hopes to contribute to the growing body of knowledge about how institutions affect human behaviour.

The next section presents the structure of the thesis.

1.5 Structure of Thesis

The thesis has eight chapters. The first is this introductory chapter. Below is a brief outline of what the remaining seven chapters cover.

Chapter two presents the review of literature that aims to answer two questions: what do we know about teaching modalities in public primary schools in South Africa? and what do we know about the persistence of the teacher-centred modality? The literature reviewed was extensive and covered a period of 70 years, starting with the Coleman Report on equality of educational opportunity published in 1966. The review traversed publications from a cross section of subdisciplines published in English. They included pedagogy, school effectiveness

[14] Yves Chevallard formulated the anthropological theory of didactic to explain teaching mathematics.

research, school change interventions, learning tasks, teacher decision-making, classroom management, education production functions and the sociology of teaching among others. The findings from the literature are discussed to show that this study hopes to make a valuable contribution to the discourse on the persistence of the teacher-centred modality.

Chapter three describes and explains the IAD framework and how it is adapted to this study. It provides reasons for selecting the IAD framework to analyse how teachers teach and what incentivises them to teach in this way. It also includes a description of the institutional grammar tool developed by Crawford and Ostrom (1995) to analyse institutional statements that teachers list as influencing their choice of teaching modality.

Chapter four presents the research design that allows for the two levels of analysis to answer the research questions: what is the form of the typical teaching modality and what explains its persistence. It explains the reason for choosing the naturalistic inquiry paradigm, the instrumental case study methodology and the choice of data-gathering instruments. It describes how the researcher administered the participant observation and in-depth interview techniques to gather data on the actions teachers take in a lesson and the salient variables teachers believe influence their teaching. It includes the criteria for the selection of sample schools. Additionally, the chapter describes the processes used to analyse the data and conduct the analysis. Finally, it discusses challenges experienced during implementation of the research design, the trustworthiness of the data and ethics of the study.

Chapter five presents the analysis of the data obtained from conducting participant observations. It describes the kind of lessons observed. It lists and describes the actions that teachers frequently took in the lessons. It analyses these actions to determine whether there is a typical teaching modality, a regularised pattern of classroom interactions. It proceeds to describe the form of the typical teaching modality, the classroom interactions it generates and the outputs these interactions produce.

Chapter six presents the analysis of the data obtained from conducting in-depth interviews. It describes the position of teachers interviewed. It analyses the institutional statements that teachers listed in the interviews to identify the shared rules and norms that teachers adopt to structure lesson. It identifies other salient variables teachers believe influence their teaching. These variables are used to create the structure of a lesson from the perspective of teachers within their contexts.

Chapter seven interprets the findings from the analysis of observation and interview data. It presents the form of the typical teaching modality and how teachers perceive the structure of teaching. It then shows how this structure creates a set of allowable actions that produce the form of the typical teaching modality. In doing so, it provides insights on the salient variables that incentivise teachers to continue using the teacher-centred modality, and an explanation for its persistence.

Chapter eight presents the conclusion of the thesis. The chapter presents a summary of my thesis, namely the interpretation and discussion of the findings to generate answers to the two research questions. It also lists the contributions of the study to the literature on teaching, limitations of the study and recommendations for future work. It ends with concluding remarks.

The next chapter presents a review of the literature relevant to the purpose of the study.

CHAPTER 2: REVIEW OF LITERATURE

The previous chapter outlined the research problem and rationale for conducting the study that intends to make an original contribution to research on the persistence of the teacher-centred modality in public primary schools in South Africa. The articulation of the rationale in chapter one drew on the literature review which is presented in this chapter. The review of literature explores two questions: what do we know about the teaching modality and the variables that influence teachers' choice of teaching modalities in public primary schools in South Africa; and what do we know about the persistence of teacher-centred modality.

This chapter is organised into four sections. The first section briefly describes the approach followed to conduct the review of literature. The second section summarises the literature on teaching in South African public primary schools and the variables that influence teachers' choice of teaching modalities. The third section presents the explanations inferred from the review of local and international literature on the persistence of the teacher-centred modality. The final section offers concluding remarks.

2.1 Approach for Conducting the Review of Literature

The snowball technique (Biernacki & Waldorf, 1981) used in sampling was applied in the search for literature on the persistence of the teacher-centred modality, teaching as structured regularized classroom interactions and the application of the institutional analysis and development (IAD) framework to teaching because the initial online search produced no results. Consequently, the second round of online search used variables that influence teaching as seeds (Parker et al., 2019) for starting the snowball technique. When a publication cited studies that referred to either the persistence of the teacher-centred modality, teaching as structured regularized classroom interactions and the

application of the IAD framework to the education setting they were reviewed. Additionally, publications that cited the articles that were reviewed were also read. This led to the Coleman report (Coleman et al., 1966), studies conducted in the United States of America (USA) on education change published in the 1970s and literature on school change interventions in Anglo-American countries and South Africa implemented in the 1990's. It also led to studies that identified teachers' norms and beliefs that may explain the persistence of the teacher-centred modality.

The search for studies on teaching modalities in South African public primary schools began with the research commissioned by the President's Education Initiative (PEI) in 1997 and studies that cite them. This led to studies that explore pedagogy and education change in South Africa.

The literature reviewed spans over 70 years. Conducting the literature review was arduous and continued until the thesis was written. The review was limited to publications in English and mainly from South Africa, the USA and England. All attempts were made to search for publications in English on studies undertaken in Latin America, Asia and Francophone and Lusophone countries in Africa.

The findings from the literature reviewed are presented below under the respective subheadings of the two questions that guided the review.

2.2 The Teaching Modality and the Variables that Influence Teachers' Choice of Teaching Modality in South African Public Primary Schools

2.2.1 Description of the Types of Studies Reviewed

The reviewed literature on teaching modality can be grouped into two types of studies: studies that explore how teachers teach and studies that examine the influence of single variables on teachers' choice of teaching modality and its effectiveness in measured learner performance. Researchers explore these two questions by observing how teachers teach a particular subject in a grade or education phase or how teachers teach a particular topic or skill within a subject and grade.

The first type of studies that explore how teachers teach apply theories of pedagogy and frameworks to describe teachers behaviour in a lesson (Hoadley, 2006, 2017; Khoza & Msimanga, 2022; Leshota & Adler, 2014; Mavhunga & Rollnick, 2015; Muthivhi &

Broom, 2008; Naude & Meier, 2019; Reeves, 2005; Rollnick et al., 2008). Hoadley (2006), for example, applies Bernstein's theory of pedagogy in her observation of teaching literacy and mathematics in Grade 3 classes to explore pedagogy as a mechanism for reproducing social inequality. Rollnick et al., (2008) apply Shulman's (1986) notion of pedagogical content knowledge to explore how high school teachers' subject content knowledge influences the way they teach the concept of mole in chemistry. Leshota and Adler (2014) use Brown's (2002) pedagogical design capacity framework to observe how teachers use textbooks to teach mathematics in high schools. Naude and Meier (2019) use cognitive load theory to explore teaching and learning in overcrowded classes. The analysing teacher moves framework is used by Khoza and Msimanga (2021) to explore the effectiveness of various questioning techniques used by teachers.

The second type of studies apply classroom observation to explore how single variables influence teachers' choice of teaching modality. The variables that researchers explore that affect how teachers teach include the use of learning and teaching support material (LTSM) (Leshota and Adler, 2014; Koornof, 2017; Pile and Smythe, 1999); changes in curriculum and associated school change interventions (Cilliers et al., 2018; Fleisch et al., 2017; Fleisch, 2016; Fleisch and Dixon, 2019; Stoffles, 2005; Taylor & Vinjevold, 1999); class size (Köhler, 2020; Marais, 2016; Naude and Meier, 2019; Taylor, 2010; West and Meier, 2020); teachers' subject content knowledge and quality of teaching (Carnoy et al., 2012; Crouch and Mabogoane, 2001; Rollnick et al., 2008; Spaull, 2012; Taylor, 2010); the effects of abolition of corporal punishment on teachers (Mayisela, 2018; Naong, 2007; Segalo and Rambuda, 2018) and socioeconomic context of teaching (Hoadley, 2003; Shalem & Hoadley, 2009).

2.2.2 Dominant Teaching Modality

Cumulatively, the studies that observe how teachers teach and explore how teachers teach describe features of the teaching modalities observed in lessons. These features suggest that there is a dominant teaching modality whereby classroom interaction is controlled by the teacher with few opportunities for learners to interact with one another, the teacher and LTSM about curriculum content. It is similar to the teacher-centred modality dominant during apartheid – the lesson is dominated by teachers talking and sometimes asking learners questions which require learners to answer them

in the form of the whole-class chorusing (Hoadley, 2006, 2012, 2018). Order in the classroom is achieved through the threat of administering corporal punishment (Fleisch & Christie, 2004; Morrow, 1990; Rossouw, 2003; Spreen & Vally, 2010).

In her review of literature on teaching in apartheid South Africa, Hoadley (2012) found three explanations for teachers in public schools choosing the authoritarian teacher-centred modality. One explanation was that it allowed for 'safe-talk' (Hoadley, 2012) which masked both teachers' and learners' poor command of English and teachers' limited subject content knowledge. The second explanation was that teachers were familiar with the teacher-centred modality from their own experiences as learners in schools and during preservice training. The third explanation was that the authoritarian pedagogic relation corresponded to apartheid social arrangements of the time.

Studies conducted after 1994 identified additional features of the teacher-centred modality pervasive in public primary schools. These include: lessons are generally characterised by a lack of structure; the absence of learning tasks which promote the acquisition of higher-order cognitive skills such as investigation, understanding relationships, and curiosity; real-world examples are often used, but at a very superficial level; little reading and writing is done by learners and when it is, it is of a very rudimentary kind; slow curriculum pacing; weak forms of assessment and lack of feedback to learners; the evaluative criteria of learning tasks are not made explicit to learners; teachers make explicit how learners should conduct themselves in the classroom; curriculum content is presented in a fragmented way or piecemeal and teachers treat learners in a class as homogeneous (Carnoy et al., 2012; Hoadley, 2006, 2012, 2017, 2018; Koornof, 2017; Taylor & Vinjevold, 1999).

Hoadley (2018) suggests that there is a dominant teacher-centred modality in post-apartheid South African public primary schools that she calls "communalising pedagogy"; it is:

> one where the teachers worked with the whole class as a homogeneous group, with little or no differentiation of tasks or differentiation of individual performances. In a communalising pedagogy, close scrutiny of what individual learners produce is not possible, and, consequently, the conditions for the

> successful production of the relevant pedagogic text are foreclosed. (2018, p. 166).

In communalising pedagogy, the interaction between the teacher and learners is communal, there is no opportunity for individual learners to express themselves in their own words or for spontaneous responses from individual learners (Muller & Hoadley, 2019).

2.2.3 Variables that Influence Teachers' Choice of Teaching Modality

The dominant reasons identified in the literature for the persistence of the teacher-centred modality in post-apartheid South African public schools include: the school environment and in particular the management of schools is not conducive to teaching and learning for substantial amounts of time; teachers' weak subject content knowledge and teachers' tendency to deny accountability for learning and attribute weak learner performance to exogenous variables (Hoadley, 2018; Taylor, 2010;Taylor & Vinjevold, 1999).

By contrast Rollnick et al. (2008) show that subject content knowledge is a critical variable in teachers' choice of teaching modality but as important are the exogenous variables such as large classes, shortage of textbooks and equipment. Hoadley (2003) tentatively suggests that parental power may also influence how teachers teach, especially the pacing of the curriculum. Studies that explore classroom variables that influence teaching in public schools show that overcrowded classrooms reduce teachers' choices of actions in the lesson, make it difficult to help individual learners, increase problematic behaviour by learners and add stress to teachers because of the extra assessments and related administration (Marais, 2016; Naude and Meier, 2019; Segalo & Rambuda, 2018; West & Meier, 2020). Preservice teachers in the study by Marais (2016), for example, report that in overcrowded classrooms they cannot choose actions that permit interactions between learners and between learners and the teacher about curriculum content because they are unable to obtain learners' attention. Similarly, the study by Naude and Meier (2019) on extraneous cognitive load in Grade 1 mathematics lessons found that large classes reduced teachers' choice of actions. In their study, teachers chose whole-class teaching to control noise levels in the class. The Segalo and Rambuda's (2018, p.4) study, on the other hand shows that teachers choose a teacher-

centred modality to manage large classes and to keep their distance from learners: "I have opted for a rigid teacher-centred approach as I do not want to interfere with the lives of learners I teach."

Gustafsson and Mabogoane (2010) hypothesise that there may be a threshold on class size beyond which learners' performance could be negatively affected. They base their argument on South Africa's performance in international standardised tests comparing unfavourably with countries with similar national incomes that have lower learner: teacher ratios. Taylor's (2010) quantitative analysis that looks at teacher variables and exogenous variables that impact numeracy and literacy learning outcomes in standardised assessments in primary schools shows that class size has an impact on learners' educational achievement in several models that he used. He rated the impact of class size a fair impact rather than strong impact.[15] Concomitantly, Taylor (2010) shows a non-linear and convex relationship between socioeconomic status (SES) and reading performance in public primary schools: "the association between reading scores and SES [socioeconomic status] is stronger at higher levels of SES" (p. 88). He suggests that this finding warrants further investigation. Recently, Köhler's (2020) study exploring class size and learning outcomes in South African public secondary schools shows that while class size matters, school management and leadership factors have a greater impact. He draws this conclusion from analysing the 2017/18 School Monitoring Survey and national senior certificate datasets that show that class size is only negatively associated with learner outcomes in wealthier schools. Besharati, et al.'s (2021) meta-analysis of interventions in South African schools to improve measured learner performance shows that interventions in secondary schools that introduce additional human resources to reduce class sizes and provide more time and attention to individual learners have a significant impact on learner achievement.

The non-linear relationship between SES and learners' measured performance seems to concur with Carnoy et al.'s (2012, p.) conclusion discussed in chapter one that South

[15] Fair impact refers to the variables that "were significantly associated with achievement in some models and the size of estimated effects was moderate" (p. 300). The analysis found four variables that have a "strong" impact on learner achievement: the number of mathematics topics covered by teachers on numeracy outcomes; teacher absenteeism, learner absenteeism and no timetable available on both numeracy and literacy outcomes.

African public schools in poor communities have "organised themselves to produce something that is not student achievement." Alternatively, the non-linear relationship between SES and learners' measured performance suggests that the "grammar of schooling" may not be appropriate for learners from poor households.

Other researchers exploring classroom variables that influence teachers' choice of actions in lessons found that teachers struggle to control the behaviour of heterogeneous learners in overcrowded classes (Englebrecht et al., 2004; Ewing & Setsubi, 1998). Englebrecht et al. (2004) in their study testing the British Index for Inclusion as part of developing a model for South African schools found that a local index should include helping teachers with addressing learner diversity and behaviour. They found "a high incidence of challenging and unsuitable behaviour, emotional problems, disrespect, discrimination and bullying and fighting" (p. 128) among learners that teachers do not know how to address. The study in Limpopo province by Mamabolo et al. (2021) exploring teachers' attitudes towards the inclusion of learners who experience barriers to learning in Limpopo province found that teachers are positively predisposed towards inclusion of these learners in their classes. However, the teachers in the study were doubtful whether the inclusion of learners with barriers to learning will improve their social skills in mainstream schools. Furthermore, the teachers were not familiar with LTSM required to teach learners with learning barriers. It appears that while teachers favour the idea of inclusion, they do not have the necessary competencies to implement inclusive education policies.

The study by Ewing and Setsubi (1998) was part of the 35 studies conducted by the PEI that specifically explored the constraints teachers and learners face in large, multilingual and multicultural classes. A representative sample of teachers from diverse schools in the KwaZulu Natal provinces' Port Shepstone education region were interviewed using a combination of open- and closed-ended questions. Teachers in the study reported that the single biggest constraint to teaching is a lack of resources, followed by high learner: teacher ratios and the heterogeneity of learners in terms of age, ability, behaviour and socioeconomic backgrounds. In the final report on the PEI, Taylor and Vinjevold (1999) interpret the findings from the Ewing and Setsubi (1998) study as teachers' blaming exogenous variables and not taking accountability for their teaching practices:

> They [Ewing and Setsubi] investigated the attitudes of principals, teachers and students towards problems in their schools and classrooms, and their likely causes and solutions. The vast majority of responses indicate that all three constituents blame forces outside their own control for their problems, and, similarly, look to outside intervention for solutions. Of course there is a great deal of justification for these views: discriminatory and authoritarian practices by the previous government resulted in the under-resourcing of most schools and the disempowerment of most school communities. However, people driven by an internal locus of control look to their own resources, in addition to what may be available from the outside, to contribute to improving their own condition. Thus improved pupil results do need external resources such as textbooks and laboratories, but, with or without additional resources, better school management and teaching practices are also required, and there are many examples that demonstrate how these factors can make a significant difference on their own. (p. 146)

Consequently, Taylor and Vinjevold (1999) conclude that attitudes of teachers are one of the "issues" or explanatory variables that affect teaching and learning in South African public schools. They do not consider the reciprocal relationship between learner behaviour and teacher actions (Doyle, 1977) especially in overcrowded classrooms that may affect teachers' choice of actions in lessons. Furthermore, Taylor and Vinjevold (1999) do not refer to the Sigabi and Mphuthi's (1999) study in the PEI that lists overcrowded classrooms as one of the variables that affects the efficacy of in-service training. Sigabi and Mphuthi's (1999) study shows that overcrowded classes make it difficult for teachers to implement learnings from in-service training.

Muller and Hoadley (2019) suggest an alternative explanation for the persistence of the teacher-centred modality and argue that the communalising pedagogy is institutionalised in poor schools through shared values and practices. They do not identify what these values and practices are, but argue that:

> The performance form we have in South Africa in most of our classrooms for the poor, in common with much of the developing world, is the outward form of a performance pedagogy which, however, instills (sic) a common or

> communalised consciousness, based on shared values and practices, cemented by consensual classroom rituals that foreclose on individualisation. … We have called the communalised form 'dysfunctional' above, but that is not strictly accurate. It communalises not because the teachers are somehow inadequate. It communalises for two other key reasons. The first is because of embedded routines of communalisation which all schools with low social capital share. These routines, especially in the rural areas, are constantly reinforced by comparison with the routines in similar schools nearby. The second reason follows on: the teachers have no local role models to mimic or to learn from. (p. 123)

Muller and Hoadley (2019) concomitantly argue that communalising pedagogy will change by "a new cohort of teachers who have been more appropriately inducted into the knowledge they need to be effective teachers" (p. 123). This conclusion contradicts their suggestion which argues that attributes of the community such as low social capital create the communalising pedagogy in poor schools. Furthermore, they do not consider how new cohorts of teachers will disrupt the 'embedded routines' or the possibility that the new teachers will be socialised into them. They seem to fall back on Taylor and Vinjevold's (1999) argument that it is teacher variables that incentivise teachers to choose a teacher-centred modality – lack of subject content knowledge and professional accountability.

Studies that explore exogenous variables that impact measured learner performance found that poor children or schools in poverty-stricken areas perform much worse than others (Crouch & Mabogoane, 2001; Taylor, 2010; van der Berg, 2008). Consequently, Crouch and Mabogoane (2001) express caution on the expectations of what the schooling sector can achieve on its own. Similarly, De Clercq and Shalem's (2021) scoping review found that the context in which teaching occurs is a significant variable that affects the efficacy of the interventions.[16] Measured learner performance in the schools that participated in the eight interventions is impacted by exogenous variables such as household poverty, education levels of the parents and literacy forms used at

[16] De Clercq and Shalem (2021) reviewed eight review and evaluation studies of large-scale interventions to support the implementation of the post-apartheid state's legislation and policies prescribing teaching and school management.

home that make it difficult for the home to serve as a second site of learning (De Clercq & Shalem, 2021). Concomitantly, quantitative modelling shows that the school's management of resources including allocation of class sizes have an impact on learner performance (Crouch & Mabogoane, 2001; Taylor, 2010; Van der Berg, 2008).

Shalem and Hoadley (2009) contend that there is a dual economy of schooling and teachers' work or what is referred to as a bimodal education system (Fleisch, 2018; Spaull, 2013). The majority of South African teachers (between 60% to 70%) work in poor schools where, according to Shalem and Hoadley (2009), learners are cognitively not well-prepared for schooling, suffer from poor health and come from homes that cannot act as second sites of learning of the kind needed to learn the school curriculum. These schools do not have functional school management nor do they have the necessary 'cognitive resources'. Cognitive resources include LTSM, media centres and libraries and teachers with rich experience and expertise in subject content and pedagogical knowledge. Consequently, they argue, it is unfair to place the burden of improving measured learner performance solely on teachers whose choices of actions are constrained by the latter exogenous socioeconomic variables. The Hoffman et al. (2016) study discussed in more detail below shows that how teachers view their professionalism is influenced by where they teach which in turn affects how they conceptualise their work. For teachers working in schools where there is poor behaviour of learners, learners' home backgrounds, socioeconomic problems in the community and community disregard for teachers are obstacles to being a professional teacher.[17] Teachers working in these schools conceive professionalism as comprising strong "pastoral care-work component" (Hoffman et al., 2016, p. 143).

By contrast there are studies on teachers' choice of teaching modality in a lesson and learning gains that found a statistically significant relationship between the amount of work done by learners or the opportunities to learn and learning gains (Carnoy et al., 2012; Reeves, 2005; Taylor, 2010). Taylor (2010) shows that there is a positive relationship between learners' performance in numeracy and teachers who assign more complex learning tasks and cover more curriculum content. The study by Carnoy et al.

[17] Hoffman et al. (2016) identify five characteristics of professionalism: knowledge, autonomy, service, qualifications and political identity.

(2012) shows that teachers who score higher in the mathematics tests, which were used to determine their content knowledge, cover more curriculum content that positively affects measured learner performance.

Onwu (1999) argues that teachers' choice of teaching modality is influenced by the availability of LTSM, namely textbooks, writing materials, writing books and teaching aids. In classes with inadequate supply of LTSM, teachers' choice of actions is reduced to whole-class teaching and learners taking notes. Other studies that explore how textbooks are used in lessons reveal that teachers do not routinely use them in lessons (Koornof, 2017; Leshota & Adler, 2014; Pile &Smythe, 1999). The reasons for the limited use of textbooks in lessons include teachers' weak conceptual knowledge of the subject (Pile and Smythe, 1999) and the legacy of Curriculum 2005 (C2005) that required teachers to design their own materials (Koornof, 2017).

The study by Leshota and Adler (2014) offers a nuanced description of how high school teachers in Gauteng province use mathematics textbooks. They apply Brown's (2002) design capacity for enactment framework which states that teachers appropriate LTSM such as textbooks on a spectrum of offloading, adapting, and improvising. Offloading represents one extreme of textbook use where teachers rely extensively on the textbook to deliver curriculum content and at the other end they use their own material with minimal use of the textbook in improvising. Adapting is in the middle of the continuum where teachers use textbooks and their own resources equally. Leshota and Adler (2014) added insertions and omissions to the design capacity for enactment framework. Insertions refer to topics that are not in the textbook which the teacher adds and omissions refer to aspects in the textbook that the teacher omits. Additionally, Leshota and Adler (2014) differentiated between the types of insertions and omissions. Insertions that add to the object of learning are referred to as robust insertions while those that detract from learning and lead to misconceptions are labeled distractive insertions. Similarly, omissions that affect the object are referred to as critical omissions and those that have no impact are classed as impotent omissions. A significant finding from the Leshota and Adler (2014) study is that teachers insert and omit topics when they offload, adapt and improvise, and that these insertions and omissions have an impact on how textbooks are used to mediate learning. They found that 20% of teachers in their study offload the textbook, 10% adapt the textbook, and 70% improvise.

Contrastingly, the study by Stoffles (2005) shows that two high school science teachers from different schools offload the textbook, which he describes as using textbooks as lesson scripts. He draws on the notion of intensification of teachers work to argue that teachers offloading the textbook is a way of reducing the workload. Stoffles' (2005) study was conducted at the time when the state implemented the revised class sizes which significantly increased the number of learners in a class and reduced the number of teachers per school. Consequently, teachers' overall work increased, including responsibilities for extracurricular activities.

There are few studies in South Africa that explore the impact of textbooks on learner performance (Hoadley & Galant, 2016). Fleisch et al.'s (2011) study comparing traditional mathematics textbooks with workbooks in Grade 6 classrooms in 44 schools show that there is no relative effectiveness of the workbooks.

The recent Eastern Africa Consortium for Monitoring Education Quality (SACMEQ) (2017) test results show that there are improvements in South African Grade 6 learners' performances in reading and mathematics and attribute these to three variables:

> a) the streamlining and strengthening of the national curriculum between SACMEQ III and SACMEQ IV, b) the focus on monitoring teaching and learning through the National Strategy for Learner Attainment and c) regular exposure to standardised assessments through the Annual National Assessment (ANA). (p. 27)

The SACMEQ (2017) report is silent on whether these legislation, policies and strategies impacted on how teachers teach considering that they were promulgated to shift teachers' choice of teaching modality based on the assumption that teaching affects learning. South Africa's performance in international standardised tests also show improvement (Hofmeyr, 2020).[18] However, Hofmeyr (2020, p. 4) cautions against this optimism. She notes that "78% of South African learners cannot read for meaning in any language by the end of Grade 4", suggesting that while reading is improving in

[18] These include the Progress in International Reading Literacy Study and Trends in International Mathematics and Science Study.

international standardised tests, it arises from a low base and still needs considerable improvement.

2.2.4 Summary of Findings on the Dominant Teaching Modality

In summary, the review of studies conducted in South African public primary classrooms show that there is a teacher-centred modality that is dominant in the majority of schools. They point to teaching as complex and influenced by several variables. This literature review suggests that the following variables affect teachers' choice of teaching modality: class size, available LTSM, heterogeneity of learners and behaviour in lessons, learners' health and cognitive preparation for schooling, homes that do not serve as second sites of learning, different levels of academic support learners receive at home, the community's disregard for teachers, low cognitive capital in poor schools, teachers' attitudes towards accountability, the LTSM available, low teachers' morale, teachers' weak subject content knowledge, lack of effective ways to discipline learners, weak school management and shared values and practices in schools.

However, as discussed in the rationale section of chapter one, the studies discussed here generally take a top-down approach and few take a teachers' perspective to understand how teachers deal with the complexity of teaching. More recently, researchers appear to suggest that teachers may be adopting shared values and practice or culture that produce the regularised classroom interactions described as the teacher-centred modality (Carnoy et al., 2012; Muller & Hoadley, 2019). However, as discussed in chapter one they do not see the teacher-centred modality as structured regularised classroom interaction or as an institution. As such they are unsure of how to explore it. This study intends to address this gap by applying the IAD framework to the teaching situation.

The next section summarises the explanations for the persistence of teacher-centred modality inferred from the review of local and international literature.

2.3 Explanations for the Persistence of the Teacher-Centred Modality

As discussed in the approach to the review of literature, there were no studies that specifically explore the persistence of the teacher-centred modality. The review of empirical and theoretical research presented in this section explores change processes in

schools and the difficulties of achieving the intended changes, the variables that affect teaching and teaching particular curriculum content and skills such as reading in light of education change interventions. As does the reviewed literature on teaching in South Africa, these studies mainly separately explore the multiple variables affecting teaching and not in configuration. Although these studies do not specifically explore the persistence of teacher-centred modalities, three explanations are inferred from this research for the persistence of the teacher-centred modality. The explanations are discussed under the respective headings in the subsections below.

2.3.1 Teaching Occurs in an Education Setting Structured by Relatively Stable Shared Rules and Norms

The first explanation is that teaching occurs in an education setting that is structured by relatively stable shared cultures, norms and rules that emerge from historical processes regulating how societies view human relations and education. These cultures, norms and rules became part of societies' tacit knowledge and come to be seen as facts (Berger & Luckmann, 1966; Dacin et al., 2002).[19] They prescribe teachers' behaviour that produces persistence and homogeneity of practices in the education setting. To change teachers' behaviour will require changing these cultures, norms and rules which will take a long time and will require collective action by society. This explanation is inferred from the literature that for the most part applies institutional theory to explore how culture, norms and rules affect teaching and the education setting.[20] A summary of how culture, norms and rules affect teaching is presented below under the respective subheadings.

How do cultures influence the persistence of teacher-centred modality? The term "culture" is used in the literature to encompass shared values and practices of a

[19] Berger and Luckmann (1966) describe the latter process of institutionalisation as: Institutionalization occurs whenever there is a reciprocal typification of habitualized actions by types of actors. Put differently, any such typification is an institution. What must be stressed is the reciprocity of institutional typifications and the typicality of not only the actions but also the actors in institutions. The typifications of habitualized actions that constitute institutions are always shared ones (p.72).

[20] Institutional theory offers a means to explore persistence and homogeneity of phenomena (Dacin, Goodstein and Scott, 2002). According to Scott (2004) institutional theory "considers the processes by which structures, including schemas, rules, norms, and routines, become established as authoritative guidelines for social behavior. It inquires into how these elements are created, diffused, adopted, and adapted over space and time; and how they fall into decline and disuse (p.2)".

community or society that influence its members' behaviour (Alexander, 2005; Denzau & North, 1994; Ostrom, 2005). The shared values and practices produce mental models that members of a community use to process information and make choices (Denzau & North, 1994). This is similar to what Bourdieu refers to as habitus (Lamaison & Bourdieu, 1986). Alexander's (2005) comparative study of culture and pedagogy in England, France, Russia, India and USA, for example, shows how national culture and historical origins influence teachers' teaching. This five-country study explores macro- and micro-levels of teaching, including educational systems, policies, national histories and classroom practices. He contends that in India the primary school education system: "carries the simultaneous residues of the brahmanical (sic) guru-disciple relationship with its ritualised teaching exchanges, Victorian colonial elementary education with its emphasis on the 3Rs and rote learning, and Gandhian post-independence resistance to both of these" (p. 7). In the same vein he attributes the emphasis on whole-class teaching in French classrooms to the French revolution that underscored community human relations over individualism and promote civic commitment and national identity.

Analogously, Tabulawa (1997) argues that the teacher-centred modality he observed in geography lessons in a public school in Botswana can be traced to colonial and postcolonial policies and Tswana culture that promote an instrumental view of education. During colonial rule education was an instrument for control and in the post-colonial period it is an instrument for economic growth. This instrumentalist view of education, together with the hierarchical social relations in Tswana society where the aged act as repositories of wisdom and children from a young age are taught to respect their elders, produces a shared mental 'banking model' of what teaching is - learners are empty vessels into which teachers deposit curriculum content. Tabulawa (1997) describes the institutionalisation of the mental banking model of education as:

> it exists as an objective condition which students, teachers and parents have internalised as part of their mode of thinking or consciousness, and it sets parameters within which they may innovate, while at the same time giving rise to spontaneous practices that are pre-adapted to it and taken for granted by teachers and students. (p. 202)

In South Africa, Walker (1989 as cited in Hoadley, 2012) argues that during apartheid teachers in South Africa were socialised into the teacher-centred modality as learners in schools and in preservice training. Walker (1989 as cited in Hoadley, 2012) describes it as:

> African teachers will have internalised a particular understanding of teacher behaviour which they then act out themselves in their own classrooms. So the dominance of transmission teaching with its concomitant emphasis on teacher-talk, drill and practice and rote learning continues to hold sway and few questions are consciously posed by teachers regarding what and how they teach, and in whose interests'. (p. 190)

The apartheid regime in South Africa, like the colonial administration in Botswana used education as an instrument of control. Teachers' work in South Africa was tightly controlled through constant surveillance by officials overseeing the implementation of apartheid policies in schools. This surveillance reduced teachers' choices of actions in the classroom which in turn produced an authoritarian relationship between learners and teachers that became institutionalised (Fleisch & Christie, 2004; Morrow, 1990; Walker, 1996). Mayisela (2024) shows that the internalisation of corporal punishment as an effective tool to achieve behavioural outcomes by teachers is a result of the violence of colonization, dispossession, slavery and the apartheid system.

The shared mental models (Denzau and North, 1994) about what education is and it is not "sets parameters" or the opportunities and constraints teachers believe they face in the teaching, in other words what they are obligated, prohibited and permitted to do. Consequently, new policies directed at changing teaching modalities are interpreted using existing mental models which results in policies being adapted and not implemented with fidelity, persistently reproducing its practice. Concomitantly, teachers may individually or collectively take actions to revise these mental models when they believe the outcomes produced are unfair. To ensure legitimacy of their actions they will need to gain the support of society.

How do norms influence the persistence of teacher-centred modality? Norms in the literature refer to cultural prescriptions that are part of a society and community's moral fabric (Ostrom, 2005). In the case of the education setting, norms regulate how teachers

relate to learners and conduct themselves in the classroom, or what Bernstein (2004) refers to as the pedagogic relation.

In a study exploring how norms influence teachers' choice of actions in the classroom, Lortie (1967) asks teachers which of their actions in the classroom make them feel ashamed. Fifty-five percent of the responses explicitly involve anger. Teachers explain that anger manifests in different forms, but the major forms involve verbal attacks on learners and, in some instances, escalate further to physical attacks. Teachers feel ashamed of these actions because they are contrary to the professional norms which expect them to act *in loco parentis* - to both control and take care of learners. Consequently, teachers hold themselves accountable for observing these norms. While teachers in the study stress that their capacity to teach is a function of their relationship with learners, Lortie (1967) argues that they manage the tension between controlling learners' behaviour and controlling their own emotions by cultivating "feigned ferocity." At the same time teachers recognise that excessive distance will make communication difficult, which will affect their relationship with learners and their ability to teach. Lortie (1967) concludes that teachers "work, often patiently, to establish control, to build rapport, to win the allegiance of diverse individuals, all in the interest of obtaining movement within constraints imposed by fractious materials and subtle, conflicting expectations" (p. 169).

Hargreaves (2001) refers to the behaviour described by Lortie (1967) as "patterns of closeness and distance" in human interactions. He introduces the notion of 'emotional geographies' to "describe the patterns of closeness and distance in human interactions that shape the emotions we experience about relationships to ourselves, each other, and the world around us" (p. 1056). He identifies five emotional geographies that shape the patterns of closeness and distance in teacher-learner interactions. These are sociocultural, moral, professional, political and physical dimensions of interactions that create patterns of closeness and distance. They may support or threaten the relationship between teachers and learners to teach effectively. If the sociocultural distance between teachers and learners is large, for example, teachers may resort to stereotyping learners which may undermine their relationship. Soldaat (2019), for example, in her study on teacher-learner relationships in a public high school in South Africa, observes that sociocultural and political distance or misunderstanding between learners and teachers

contribute to a negative classroom environment that affects teaching. In addition, she notes that in teachers' efforts to foster emotional understanding and build a positive working relationships with learners, they take on roles of a coach, counsellor and parental figure. She also found that young women teachers, in their efforts to create rapport with learners, experience sexual harassment by male learners. More recently, Beneke et al. (2022) drawing on emotional geographies explore how do white, nondisabled teacher candidates engage in emotional practices in relation to race and ability (ableism). They found that white nondisabled teacher candidates constructed three geographies of exclusion: gratitude, ambivalence and care. Gratitude for their privilege, ambivalence towards the racism and ablism they witnessed and care that allowed them to position themselves as knowledgeable for their own social benefit.

Tsang's (2014) drawing on Hochschild's (1977) study of emotional labour in interactive service work reviewed research on teachers' emotions. The review reveals that teachers' emotions are structured by five feeling norms, namely to love and show enthusiasm for learners, be enthusiastic and passionate about subject matter; avoid the display of extreme emotions like anger, joy and sadness; love their work and have a sense of humour and laugh at their own mistakes and the minor offences of their learners. Consequently, teachers are required to hide negative emotions towards learners and to show love and care. Tsang (2014) argues that teachers feel guilt and shame both for feeling and hiding the negative emotions. He further contends that teachers' emotions are not a function of either structural features or their personal agency but of both, in the context of how they see the purpose of teaching.

Hargreaves and Goodson (2006) and Goodson et al. (2006) argue that how teachers' see their professionalism may be influenced by their 'generational mission'. The social missions that were dominant in their youth may continue to influence how teachers engage with change. Goodson et al. (2006) describe it as:

> teacher resistance to change, in other words, is as much an historical matter of the generational concerns that cohorts of teachers form in the early years of teaching and adulthood, and that they then carry with them and protect throughout their careers, as it is a physical and life consequence of aging or movement toward the end of the teaching career. (p. 43)

The Hoffman et al. (2016) study mentioned earlier that explores how teachers view their professionalism shows that it is influenced by where teachers teach, which in turn affects how they relate to learners. The study surveyed teachers from 115 schools in the Western Cape and shows a positive statistically significant relationship at the 0.01 level between teachers' emphasis on obstacles related to social trauma and their preferences for a pastoral care view of teacher professionalism. The study shows that many of the teachers teaching in poor schools "stress pastoral care-work as being central to their conceptualisation of what it is to be a professional teacher, while those at fee-paying schools stress their claims to pedagogical knowledge and job prestige" (p. 2). The authors hypothesise that there may be different 'informal rules' in no-fee schools and fee-paying schools that influence how teachers conceive their work and recommend future research to explore these. They use the term 'informal rules' to include norms that tacitly guide teachers' behaviour.

In South Africa, the legislation and regulations that prescribe teachers' relationship with learners and their conduct are stipulated by the norms and standards for educators in South Africa (National Department of Education (NDoE), 2000) and the code of professional ethics published by the South Africa Council for Educators (SACE) (2022). The norms and standards for educators prescribes seven roles of an educator (teacher), namely learning mediator; interpreter and designer of learning programmes and materials; leader, administrator and manager; scholar, researcher and lifelong learner; community, citizenship and pastoral role; assessor and learning area/subject/discipline/phase specialist. The teacher's community, citizenship and pastoral role prescribes how teachers should relate to learners. This role obligates teachers to:

> practise and promote a critical, committed and ethical attitude towards developing a sense of respect and responsibility towards others. The educator will uphold the constitution and promote democratic values and practices in schools and society. Within the school, the educator will demonstrate an ability to develop a supportive and empowering environment for the learner and respond to the educational and other needs of learners and fellow educators. (NDoE, 2000, p. 14)

The community, citizenship and pastoral role of a teacher and the code of professional ethics (SACE, 2022) lists the kinds of actions teachers are obligated, prohibited and permitted to take in their interactions with learners and the kind of classroom environment they should create. Concomitantly, the teacher's *in loco parentis* role is embedded in South African common law (Oosthuizen & van der Walt, 1998). According to Oosthuizen and van der Walt (1998), it does not mean that the teacher's role is equated to that of parents but rather that the duties of teachers are comparable to those of parents, namely, to maintain discipline, educate and care.

While the codes and regulations regulating how teachers should relate to learners in South Africa obligate teachers to conduct themselves in the manner that upholds the Constitution and maintain discipline, educate and care for learners, studies in South Africa show that teachers in practice take on the role of the parent and "love them [learners] like they your own children" (Soldaat, 2019, p. 82), stressing pastoral care in poor communities (Hoffman et al., 2016). This suggests that the norms of the *in loco parentis* dictum and pastoral care may be more dominant than learning mediator and assessor when teachers teach learners who face multiple forms of deprivations in the home.

Hwa's (2023, p. 3) study to understand the factors that underlie teacher norms that incentivise them away from facilitating learning or hinder learning offers a way of exploring the origins of teacher norms. She defined norms as "dominant beliefs among teachers about the most suitable practices and priorities in their contexts." She conducted 14 paired interviews with teachers and researchers with expertise on norms in the teaching profession. She conducted two levels of analysis of the transcripts. In the first analysis she grouped factors underlying norms into four domains of teachers' experiences, namely: selves (what teachers value), situations (what teachers believe can be done in their situation), standards (what those in charge expect) and society (broader influences). In the second level of analysis she groups teachers' norms into three types – coherence, compromise and contestation:

> Coherent norms result from mutual compatibility between top-down standards, what teachers' selves value, and what their classroom and school situations look like. Compromise norms emerge when teachers value the standard in question

> but believe it to be unfeasible in their contexts. Contestation norms occur when teachers do not endorse the standard and have latitude in their situations to depart from it. (p. 25)

Consequently, Hwa (2023) argues that change interventions should identify the norms that hinder learning as a first step towards formulating a theory of change (ToC). She suggests future research should consider the process of institutionalising new norms for teachers that promote learning for all learners. While she recognises that the underlying factors act in configuration to influence teachers to adopt norms for their contexts, she recommends that policymakers should focus on teachers' preferences such as teachers' beliefs rather than shared norms that create the regularised patterns of classroom interactions that do not facilitate learning. The study by Sabarwal et al. (2022) show that teachers' beliefs not only affect learner measured performance but also policy implementation. Using survey data from 20 000 teachers across nine developing countries, they found that teachers believe that "there is little they can do to help a child learn if parents are uneducated" (p. 76), learners who perform well require extra attention and it is acceptable to be absent if learners are left with work to do or the curriculum has been completed or they are doing something useful in the community.

Recent work drawing on behavioural science argues that it is important for change interventions, especially those targeting changing pedagogical practices to consider behavioural barriers (Flaschen et al., 2024). They identify eight behavioural barriers that affect teachers' uptake of innovative pedagogies. These are that teachers have too much to do and not enough time in which to do it; limited attention and experiencing information overload; experiencing change as hard, especially for teachers who have been teaching for a long time and believe that their approach is correct (status quo bias); uncertainty of the outcomes (aversion to ambiguity); low self-efficacy; external locus of control; finding it too complicated due to limited attention and hassles or small obstacles that prevent them from taking up new practices.

How do rules influence the persistence of teacher-centred modality? Meyer and Rowan (1977) argue that the rules that structure the education setting are those that prescribe a rational bureaucratic organisation form. The rational bureaucratic organisational form is an outcome of the industrial production processes. These

processes were based on the division of labour between and within organisations that needed coordination and control. The rational bureaucratic organisational form is based on the assumption that hierarchical relations underpinned by the command-and-control doctrine reduces the complexity of coordination and control, mitigate against uncertainties that arise from the production process and is efficient. This rational bureaucratic organisational form was advocated by powerful elites and supported by legislation, as an efficient way of organising the education setting at the onset of mass schooling (Tyack & Tobin, 1994). These variables assisted with its institutionalisation (Berger & Luckmann, 1966). Consequently, the education setting has incorporated the rules that prescribe the rational bureaucratic organisational form and are now taken for granted and seen as facts or the "grammar of schooling" (Tyack & Tobin, 1994). Meyer and Rowan (1977) argue that for schools to gain legitimacy and access to resources they must comply with this organisational form which in turn leads to isomorphism.

Tyack and Tobin's (1994) paper *The "Grammar" of Schooling – Why Has It Been So Hard to Change?* Is useful for identifying the rules that produce the rational bureaucratic organisational form of modern education organisations, especially schools and universities. These rules prescribe time, subjects and academic credits to ensure standardisation or isomorphism of schools and what constitutes a school. Together these rules produce the modern school of graded classrooms with single teachers, division of school time into periods, fragmentation of knowledge through strong classification of subjects, articulation of sequence and pace of knowledge transmission in the curriculum and annual assessments to progress learners. The criteria for the attainment of a qualification are based on the accounting system using the Carnegie units that specify the time spent on the subjects. At a pedagogic level Martin Haberman (1991, pp. 290-291) notes that while there are various forms of pedagogy that can be observed in urban schools, "there is a typical form of teaching that has become accepted as basic" and teachers who do not engage them "would be regarded as deviant." These include giving information, asking questions, giving directions, marking assignments, monitoring seatwork, reviewing assignments, giving tests, reviewing tests, assigning homework, reviewing homework, settling disputes, punishing non-compliance, marking papers and giving grades. Consequently, it is difficult to change the bureaucratic organisational

form of schools because the criteria for evaluation are externally legitimated by society at large about what 'the real school' is (Meyer & Rowan, 1977; Tyack & Tobin, 1994).

In looking back at the change interventions since the publication of the *"Grammar" of Schooling – Why Has It Been So Hard to Change?*, Cuban (2020) observes that these reforms may not have helped to transform the organisational form of schooling, but may have made incremental changes. These include teachers changing seating arrangement, lessons that incorporate learners' interests, small group work, independent research among others. Recently, the teaching at the right level or targeted instruction approaches where teachers teach small groups of learners that are at similar learning levels and rotate them (Angrist and Meager, 2023; Ismail et al., 2024) is being promoted by international development organisations.

Tyack and Tobin (1994) note that early in the implementation of the modern school organisational form evidence emerged that the grammar of schooling was not appropriate for all learners and did not accommodate individual learners' needs. The strict curriculum pacing and assessment rules were generally effective for those learners whose "culture matched its requirements" (p. 460), but not for children of new immigrants and the working poor in the USA. The introduction of teaching at the right level by international development organisations appear to recognise that age-based and grade-level teaching is not efficient (Angrist & Meager, 2023; Ismail et al., 2024). However, the teaching at the right level intervention does not address the grammar of schooling.

At the pedagogic level Basil Bernstein (1975, 1981, 1999, 2003, 2004) offers a grand theory (Shalem, 2017) of how the pedagogic device structures the pedagogic relation that influences teachers' choice of actions in the classroom, and serves as a mechanism for cultural relay in industrial societies founded on the division of labour. The pedagogic device is the mechanism through which power is realised: "symbolic control is materialised through what I call a pedagogic device. The device consists of three rules which give rise to three respective arenas containing agents with positions/practices seeking domination" (Bernstein & Solomon, 1999, p. 269). The hierarchical rules prescribe the appropriate conduct in the pedagogic relation. As such, teachers must acquire the "rules of social order, character, and manner which became the condition for

appropriate conduct in the pedagogic relation" (Bernstein, 2004, p. 198). Sequencing rules recognise that transmission of knowledge and skills cannot be done at once but through progression. Sequencing rules therefore prescribe content progression and also create pacing rules that prescribes the rate of acquisition of the sequencing rules. The evaluative criteria/rules prescribe "what counts as a legitimate or illegitimate communication, social relation, or position" (Bernstein, 2003, p. 58). Bernstein (2003) theorised that these rules are the: "fundamental grammar or ordering principles of a pedagogic practice and the forms of realisation as pedagogic types" (p. 203). Consequently, he argues that the pedagogic device can generate a range of teaching modalities: "a finite set of rules which can generate a great number of other rule systems" (Bernstein; 2003, p.57). These permutations are generated by how the three rules are made visible to the learner (strong classifications and framing) or are invisible (weak classification and framing). Hugo and Wedekind (2013), for example calculate 256 permutations. This calculation is based on teachers choice being limited to eight pedagogical categories and teachers choosing extremes, that is strong or weak framing and not anything in between. At the two extremes, Bernstein (2004) defined visible pedagogy and invisible pedagogy. In visible pedagogy the rules are made explicit to learners, whereas in invisible pedagogy these rules are not explicit. To demonstrate this spectrum of teaching modalities Bernstein (1975) uses the preschool learning environment where learning through play is an example of invisible pedagogy where the teacher does not make explicit the hierarchical, sequencing and pacing and evaluative criteria rules to the learner. Whereas in visible pedagogy the teacher controls the pedagogic relation, sequencing and pacing, evaluative criteria and other aspects of classroom interactions. He argues that these teaching modalities provide learners with experiences that shape their forms of "consciousness, identity and desire" (Bernstein & Solomon, 1999, p. 269). Therefore, control over the pedagogic device is how pedagogy serves as a mechanism for cultural relay (Bernstein & Solomon, 1999):

> The pedagogic device, the condition for the materialising of symbolic control, is the object of a struggle for domination, for the group who appropriates the device has access to a ruler and distributer of consciousness, identity and desire. (p. 269)

Another practical way in which the pedagogic device is a mechanism for asserting power and control is through resource allocation, Bernstein (2003) shows that middle class children have two sites for curriculum acquisition – the school and the home – which working class children do not have. Consequently, schools located in working class areas will need more resources including time and smaller classes to help their learners attain the curriculum content at the prescribed pace. In the absence of these additional resources, Bernstein (2003) claims that schools are more likely to weaken the pace rules and stress operations knowledge rather than principles/conceptual knowledge in the curriculum content:

> where the catchment area of a school draws upon a lower working-class community it is likely, as we have seen, that the school will adopt strategies, or have strategies forced upon it, which will affect both the content and the pacing of the transmission. The content is likely to stress operations, local skills rather than the exploration of principles and general skills, and the pacing is likely to be weakened. (p. 67)

In South Africa Bernstein's pedagogic device is used by educationalists to explore how teachers teach and to assess the efficacy of teaching modalities. These researchers draw on the work of Morais et al. (2004) that uses the pedagogic device to find practices that facilitate learning of scientific knowledge among poor children. Reeves (2005), for example, uses the pedagogic device to assess the relationship between opportunities to learn and measured learner performance. Hoadley (2006) uses Bernstein's pedagogic device to explore the mechanisms whereby social difference is reproduced through teaching modalities. She posits that the teaching modality in poor schools that does not make the evaluative criteria explicit to learners for them to recognise what is required contributes to weak learner performance in poor schools and reproduces inequality. In an earlier study, Hoadley (2003) shows how the pacing rule that affect teachers' choice of teaching modality is influenced by social relations between teachers and parents. These studies align to Bernstein's (1975 p. 27) proposition that the matrix of teacher and learner can be analysed in a number of ways, including "the principles underlying the matrix" and "the relationships between critical matrices, e.g. family, peer group, school, work."

The difficulty with Bernstein's theory is that the language is too specific to his theory and does not allow for comparing theories of pedagogy. Furthermore, key concepts are ambiguous; for example, he uses rules interchangeably with principles.

While Bernstein (2003) notes that schools adapt the rules to meet their respective contexts and resource constraints, implementation researchers in the USA contend that the command-and-control management approach intrinsic to the rational bureaucratic organisational form does not hold for teaching. Weick (1976) proposes that schools are not truly rational bureaucratic organisations and that they may be "loosely coupled". In other words, the technical core (teaching) is decoupled from the administration or management, resulting in the break of the efficiency of the command-and-control management approach. While Weick (1976) notes that loosely coupled organisational forms can protect the technical core from every little change in the environment, it can also prevent the changes that can enhance the efficiency of the technical core. Meyer and Rowan (1977) drawing on Weick's (1976) notion of loosely coupled systems, theorise that school administrations comply with the new legislation and policies or other changes in the environment 'ceremonially' to maintain legitimacy and access to resources when they are in conflict with the efficiency criteria of the technical core. The study by Levy et al. (2016) on school governance and politics in South Africa reveals that the strong bureaucratic organisational form promoted by the Western Cape department of education did not necessarily translate into improving learning outcomes, but rather incentivised ceremonial compliance. They refer to this form of bureaucratic compliance as 'isomorphic mimicry', similar to Meyer and Rowan's (1977) notion of isomorphism. Puttick (2017) observed isomorphism in teaching geography in three spatially separated secondary school. He contends that this isomorphism is an outcome of three variables, namely coercion through strong regulations, uncertainty of what to teach and how to teach and normative views of good teaching.

Other implementation researchers show that schools are not decoupled organisational forms because teachers do comply with legislation and regulations in accordance with the various contexts. Coburn's (2004) unique study shows how changing policies prescribing teaching reading in California schools between 1983 and 1999 affected teachers' choice of actions in the classroom. The changes in policies prescribing teaching reading were influenced by different reading movements such as basic skills,

literature-based instruction, early literacy, and balanced basic skills. She found that the extent to which teachers change their teaching is influenced by the pressure from the environment and their own beliefs and practices about reading. She observes that teachers adapt policies into their preexisting teaching modalities that they have developed over time. She argues that regulative pressures obligate teachers to comply, placing technical limitations on teachers' decision-making. In other words, it reduces their autonomy and produces "bounded autonomy." This in turn reduces the set of actions that teachers can choose from. More recently, Griffith and Groulx (2014) show that schools and teachers do comply with policies. Their study exploring teachers' decision-making shows that teachers participating in the Reading First[21] programme choose the approach it promotes to teach reading.

In the same vein, the review and evaluation of the National Literacy and Numeracy Strategies implemented in England in 1997 that are designed around strong bureaucratic accountability measures show that teachers do respond to the new policies prescribing teaching literacy and numeracy. They comply with the strategies' visualisation of the primary school classrooms but there is little shift in teachers' understanding of new teaching modalities the strategies promote. Teachers comply with teaching methods, patterns of classroom organisation and handling of time, space and resources prescribed by the strategies (Alexander, 2004; Earl et al., 2003), but they did not change their fundamental practices as described by Alexander (2004):

> pupil–teacher interaction is still dominated by closed questions, brief answers which teachers do not build upon, phatic praise rather than diagnostic feedback, and an emphasis on recalling information rather than on speculating and problem-solving. (p. 21)

The strong bureaucratic accountability measures of recent school change interventions can also crowd out schools' intrinsic commitments and produce perverse outcomes. Fleisch (2006), for example, explores bureaucratic accountability in the Education Action Zone project that obligates high schools to meet minimum functions and practices in the Gauteng province as a means to improve schooling outcomes –

[21] Reading First aims to ensure that every child can read on grade level by the end of Grade 3.

performance in the national senior certificate (matric) examination. The study shows that schools gamed (manipulated) the requirements by excluding underperforming or at-risk learners from participating in the high-stakes matric examination.

Recently, Angrist and Meager (2023) argue that implementation matters and contributes to the effectiveness of an intervention. They argue that "null effects could be due to an ineffective program or an effective program which was never implemented. Without information on implementation, a null result may be misattributed to a treatment effect when in fact it is null implementation" (p. 3). They explored the variation of impact of targeted instructions across five contexts and found that this was due to the delivery model (teachers or learners) and the degree of implementation.

The above studies show that while policymakers assume that the command-and-control management approach is effective in schools and that teachers will implement policy prescripts with fidelity, in practice teachers adapt them to their respective contexts and practices. However, instead of exploring contextual variables and norms and rules that act in configuration to influence how policy is implemented, schools and teachers are seen as the problems. The Earl et al. (2003) study for example recommend that schools and teachers capabilities need to be developed to ensure better compliance with the National Literacy and Numeracy Strategies implemented in the United Kingdom.

There are studies that show schools do implement new legislation and policies with relative fidelity. These studies show that this occurs in situations that do not assume the command-and-control implementation approach, but rather that both school managers and teachers work closely together to effect change. Spillane et al. (2011), in a three-year study in four primary schools in Chicago to explore how new policies are adopted by schools, found that changing school routines acted as a mechanism for coupling the new policies to teaching. Some of the routines implemented in the study schools included a five-week assessment cycle, teachers working collaboratively to plan their lessons and increased monitoring of teaching. The researchers found that the success of the routines as coupling mechanisms is attributable to encouraging more interaction between the staff rather than changing individual action. In other words, it is about changing the organisational form of schools from command-and-control and privatising teaching to working together to develop teaching modalities that are centred on

learning. However, the study did not go as far as to understand the process of institutionalising the teaching modalities that the new routines promoted to ensure that:

> as staff participate in the performance of organizational routines and come to take them for granted, government regulation, or perhaps more correctly some of the core ideas advanced through regulation, becomes embedded in the school's formal structure. (Spillane et al., 2011, p.614)

In South Africa, Fleisch and Dixon (2019) attempt to shift individual teachers' teaching modality through offering scripted lesson plans that provide an alternative lesson routine and coaching assistance and new materials to help teachers implement them. They see the scripted lesson plans as the mechanism for changing practice – it affects how teachers use time and space. However, they do not engage the school and continue to privatise teaching. While they observed a shift in teaching modality among individual teachers and claim that teachers have internalised the new routines, it is unclear whether the shift is institutionalised among these teachers or has become habitual, and whether these teachers are supported by the school. However, in their conclusion they recognise that for the new routines to become an institution "binding constraints require attention. These are policy and organisational impediments that militate against the effectiveness of new instructional practices" (p. 10). Fleisch and Dixon (2019), like Hugo and Wedekind (2013), focus on the institution without asking a more fundamental question – what incentivises teachers to choose one teaching modality over others.

Bridwell-Mitchell (2015) argues that mechanisms such as peer learning, social cohesion and shared understanding of teaching facilitate the institutionalisation of new teaching modalities. Concomitantly, she argues that these mechanisms can serve as countervailing forces to the changes in that the collective may resist the practices of change interventions, for example in schools where teachers have close relations with one another and share similar views of teaching, social cohesion can facilitate them coming together to oppose new practices.

Other education researchers argue that for sustainable change to occur in schools, the criteria of how schools should be organised and what good teaching and learning is should also be externally supported by the education setting and society at large (Burch, 2007; Elmore, 1996; McLaughlin, 1992). Elmore (1996), for example, argues that for

large-scale interventions to be effective they must be supported by all the participants that make up the education setting. The messages from the education setting will give the new practices legitimacy and influence teachers' behaviour. The three-year study by Talbert and McLaughlin (1992) takes a teacher's perspective to explore the contextual variables that influence their teaching. It demonstrates that teachers' choice of actions in the classroom is influenced by the education setting. As discussed in chapter one, they suggest that the teaching situation is nested in eight layers in the education setting, or what McGinnis (2011b) refers to as 'adjacent situations'. Talbert and McLaughlin (1992) believe that the bottom-up approach to their study helped to identify how rule taken for granted such as success standards in higher education – which they refer to as contexts affects teaching. They found, for example that teachers in high schools conceive their work as "implementing text" (p. 21) because of the policies prescribing entrance to higher education.

In a similar analysis, Burch (2007) assessed how the subject discipline informs professional development in mathematics and literacy education in a large-scale intervention to improve learning and teaching. The administrators and teachers she interviewed and the materials reviewed have very particular concepts of literacy and mathematics which influence how the large-scale intervention is implemented in these subjects:

> in literacy, unlike mathematics, the emphasis was on how teachers taught and less on what concepts they covered and had mastery over as teachers. In mathematics, building teachers' skills was framed as developing their conceptual knowledge of mathematics … mathematics was understood mainly as a problem of teachers' content knowledge; in contrast, literacy was understood mainly as a problem of teachers' pedagogical knowledge. (p. 88)

The theoretical and empirical studies presented above show that teachers' choice of actions in the classroom is influenced by the cultures, norms and rules that structure the education setting (Bernstein, 2004; Coburn, 2004; Lortie, 1967; Meyer and Rowan, 1977; Tyack and Tobin, 1994) which is nested in layers (Burch, 2007; Talbert and McLaughlin, 1992) and influenced by historical processes (Alexander, 2005; Fleisch & Christie, 2004; Tabulawa, 1997). The cultures, norms and rules that structure the

various layers interact with each other to influence teachers' choice of action in the classroom. Like Bernstein's arenas, Talbert and McLaughlin (1992) urge that to understand teaching is to not only understand contextual variables but also how they interact with one another (p. 29): "understanding context effects on teaching requires a view of the conditional nature of any context effect and of the multiple contexts that combine and interact to influence teaching practice."

Concomitantly, there is agreement that cultures, norms and rules are social constructs that can be changed to produce outcomes that are fair and just for all participants in the education setting. Tyack and Tobin (1994) summarises this as:

> Humans build organizations and can change them. Cultural constructions of schooling have changed over time and can change again. To do this deliberately would require intense and continual public dialogue about the ends and means of schooling, including reexamination of cultural assumptions about what a "real school" is and what sort of improved schooling could realize new aspirations. Shared beliefs could energize a broad social movement to remake the schools. To do so would require reaching beyond a cadre of committed reformers to involve the public in a broad commitment to change. (p. 478)

2.3.2 Teaching Occurs in Diverse Contexts

The second explanation is teaching occurs in different contexts and the respective contextual variables affect how mandated change is interpreted and implemented in schools. Put differently, implementation should be considered as mutual adaptation rather than uniform implementation (Berman & McLaughlin, 1975; McLaughlin, 1987; Weatherly & Lipsky, 1977). As such, a radical shift in teaching may not be possible.

In a seminal study Weatherley and Lipsky (1977) explored how 'street-level bureaucrats' i.e. public servants at the coalface of delivering social welfare services use their discretionary powers to influence implementation of legislation. They observed how three local school systems in the State of Massachusetts' in the USA implemented the Chapter 766 Act of 1972 on the education of learners with special needs. At the time of the legislation, the rules and regulations affecting children who needed special classes were arbitrary, culturally biased and often exploited by teachers to "get rid of

troublesome youngsters than to educate them" (p. 174.). The Chapter 766 Act of 1972 obligates schools in the state to include learners with special needs into the mainstream public education system on the basis of "thorough assessment and planning for each handicapped child by an interdisciplinary team, without undue reliance on standardized tests" (p. 174). The law also allows for parental involvement and due processes for appeal. Additionally, it assigns authority for implementing the legislation to local school systems. Weatherley and Lipsky's (1977, p. 194) study show that "there was a constant need to routinize, ration resources, control uncertainties, and define the task to derive satisfactory solutions to the new demands." Street-level bureaucrats used their discretionary powers to adapt policies, strategies and related legislation and regulations prescribing their work in ways that they believe are satisfactory in their contexts. These satisfactory solutions become the policy that the public experience. In addition, the study shows that adaptation does not guarantee that the child will receive uniform services under the Chapter 766 Act of 1972. Nonetheless, the law did put special education on the agenda of schools and obligated school systems to comply.

Analogously, the Rand Corporation multi-year study on the change agent programmes funded by the federal government in the USA to "introduce and spread innovative practices" (Berman and McLaughlin, 1977, p. iii) also shows that legislation is adapted to local contexts. Berman and McLaughlin (1975, 1977, 1978) argue that there is no simple linear relationship between government inputs (through legislation and related resources) and outputs (change in teaching practices, etc.) and that implementation contexts matter: "project outcomes did not depend primarily on 'in-puts' from outside but on internal factors and local decisions" (Berman & McLaughlin, 1975, p. 36).

The ToC in the federal government change agent programmes assumes that the initial seed funding will be used to design and implement innovative projects that, when successful, will be incorporated into normal programming by school districts using their own funds. As such, the Rand Corporation study asks two questions: why have change efforts failed to produce consistently successful innovation and why have successful projects experienced difficulty sustaining their success over a number of years. The study explored implementation effectiveness (meeting project goals) and change in teachers' behaviour as a result of the innovation. A major finding from their study is that the institutionalisation of innovations requires two conditions to be met, namely

that teachers assimilate the innovations and that the projects receive political support from the district management. Additionally, they show that institutionalisation of innovations is also dependent on how projects are initially mobilised and implemented. Berman and McLaughlin (1975) argue that institutionalisation is likely to occur when there is genuine engagement by all stakeholders during the mobilisation and implementation phases.

Since, the publication of the Rand Corporation reports, McLaughlin (1990) revised two of the findings, namely that local implementers, including teachers, must be motivated to ensure the success of the interventions and that outside consultants are too removed from local contexts to provide adequate support and be responsive. Drawing on contemporary research, she revised these findings to record that teachers' beliefs can change or follow practice and consultants can help to stimulate and support local efforts to improve practice.

The revival of large-scale school change interventions globally in the 1990s, including in post-apartheid South Africa, applied similar top-down linear treatment ToC employed in federal government change agent programmes of the 1970s, and added "pressure and support" as the mechanism for changing teaching modalities (Earl et al., 2002; Earl et al., Elmore, 2016; 2003; Fleisch, 2018; Fullan, 2009; Garcia-Huidobro et al., 2017; Hopkins, 2013; Schmoker, 2004). Pressure through legislation and monitoring thereof provides legitimacy to interventions, and support offers the assistance required for teachers to comply with the new legislation and policies. Pressure is exerted through intensive monitoring of learning outcomes and teachers' work. The support is evident in structured pedagogy programmes (Shalem, 2013; Hoadley, 2024) or what Fleisch (2018) refers to as the 'triple cocktail' which includes scripted lessons, training and coaching and materials. Similar to McLaughlin's (1990) revisions, these global large-scale change interventions of the 1990s assume that by teachers using the new inputs, treatments, and technologies they will gain experience and develop confidence and expertise which will result in changes in teaching modality. In other words, doing is the first step to change, or put another way, understanding will follow action. However, in practice these large-scale interventions centred on controlling teachers' work rather than supporting teaching (Hargreaves, 2009), and formulated one-size-fits-all approaches to teaching. In doing so, they tightly controlled teachers' work (Hautala et al., 2018).

However, Hautala et al. (2018) contend that schools can be simultaneously loosely and tightly coupled and that they can be loosely coupled to some instructional practices and tightly coupled to others.

The evaluations of some of the large-scale school interventions implemented in the 1990s, while focusing on measuring learning outcomes, nonetheless show that context matters. The findings resonated with implementation researchers of the 1970s discussed earlier, that implementation was not uniform across schools and education districts. The evaluation team for the national literacy and numeracy strategies in England, for example, observe that the strategies are implemented differently in schools and the variation depends on the capacity of the schools (Earl et al., 2003). Capacity refers to school managers and teachers' skills to implement the strategies. However, in their conclusion they fall back on blaming teachers - that understanding of the strategies require highly skilled teachers and that building this capacity will take a long time.

The evaluation of the large-scale secondary school reform in Ontario implemented in 1997 shows that the political context at the time influenced how teachers viewed the intervention (Earl et al., 2002). The political context was characterised by volatility and destabilisation because new legislation to support the intervention was promulgated quickly without broad consultation, spending was reduced and teachers' workload was increased. In this political climate the evaluation team found that teachers were making very personal decisions such as redefining their standards for teaching. The teachers' trade union resolved that their members would stop doing extracurricular activities to compensate for the increase in teacher workload at the time the evaluation of the secondary school reform was conducted.

Similarly in post-apartheid South Africa, studies show how the political climate influences how school change interventions are received and implemented by teachers. Historically, as discussed in section one, apartheid education was implemented through surveillance (Fleisch & Christie, 2004; Morrow, 1990; Walker, 1996). Jansen (2004) argues that teachers' suspicions and resistance towards inspectors and outsiders visiting their classrooms during apartheid may explain their initial strong opposition to accountability measures implemented by the post-apartheid state. South African researchers also show that the school effectiveness research that identifies generalisable

variables to be manipulated to improve learning outcomes is problematic in that it assumes that context does not matter (Carrim & Shalem, 1999; Fleisch & Christie, 2004). Fleisch and Christie (2004) show how the broader political changes in South Africa in 1994 towards constitutional democracy gave legitimacy to school leadership, such as principals' roles in both managing the school and providing curriculum guidance which would not have been possible during apartheid. Then, they were seen as agents of apartheid who were upholding Bantu education and other apartheid policies.

Research on the two waves of large-scale school change interventions shows that "context matters" and that teachers, schools and districts are more likely to adapt policies to their contexts. Under strong pressure they may be incentivised to game the accountability measure to show compliance instead of being seen as struggling and underperforming.

2.3.3 Teaching is Dynamic and Interactive

The third explanation for the persistence of the teacher-centred modality is the interactive nature of teaching. Teaching in modern schooling where a single teacher is responsible for controlling a group of diverse learners with heterogeneous preferences for classroom interactions is fundamentally the relation between the teacher and a group of learners and the curriculum. This interactive relationship influences teachers' choice of teaching modality and how they adapt new policies. As such, to change teaching will require a change in this organisational form and the associated relationship.

The interaction between learners, learners and the teacher and learners and LTSM is constant in classrooms; events occur quickly and often simultaneously and are unpredictable and public and require teachers to be alert and responsive to these continuous shifts (Borko et al., 1990; Clark & Lampert, 1984; Clark & Peterson, 1984;Clark & Yinger, 1979; Doyle, 1980, 1984, 2006; Shavelson & Stern, 1981). Teachers make decisions roughly at two-minute intervals during teaching (Clark & Lampert, 1986). In this uncertain classroom environment, argue Clark and Lampert (1986) that "a large part of what guides a teacher's thinking, planning, and decision-making, then, is the goal of maintaining a productive social system" (p. 29).

The studies on teacher decision-making processes during interactive teaching suggest that teachers reduce the large number of variables that they must consider by routinising their lessons (Borko et al., 1990; Clark & Lampert, 1984; Clark & Peterson, 1984; Shavelson & Stern, 1981). In doing so, learners are obligated to behave in accordance with the patterns of interactions of the routine. This in turn makes learners' behaviour more predictable and requires less information processing by teachers. Teachers need only monitor whether learners are complying with the routine and whether the routine is implemented as planned, or what Shavelson and Stern (1981) call the "activity flow". This allows them to make quick or instantaneous decisions – they can choose to take or not to take actions or they can choose to change the activity or to continue with it when learners' responses deviate from the expected behaviour.

Doyle (1980) argues that classroom order rests fundamentally on teachers' choice of learning tasks. Teachers' routines are based on their choice of learning tasks, the sequence of implementing the learning tasks and allocation of time for learning tasks. Studies that explore teachers' planning processes confirm that the choice of learning tasks is central to teachers' lesson planning process. This finding contradicts the rational linear approach to planning a lesson taught to preservice teachers: start with setting lesson objectives or learning outcomes, choose learning tasks to enable the achievement of lesson objectives or learning outcomes, decide on the sequence of learning tasks and then evaluate the lesson (Clark & Yinger, 1979). In practice teachers plan around their perceptions of learners and how learners will engage with the demands of the learning tasks. In addition, contextual variables such as school contexts, available or prescribed textbooks, legislation, policies and regulations and their beliefs about teaching and the subject matter influence teachers' choice of learning tasks (Aho et al., 2010). Shavelson and Stern (1981) comment that: "the teacher must decide how to entertain his or her audience while attending to the curriculum. Activities, then, and not the prescriptive model are the focus of teacher planning" (p. 477). Clark and Peterson (1984) propose a cyclical or reciprocal model of teacher planning where teachers' choice of actions influence learner behaviour, which in turn affects teacher behaviour.

There is a separate literature on learning tasks which posits that learners learn the official curriculum through the doings that they are assigned in the classroom or

learning tasks and the related forms of assessment (Brophy & Alleman, 1991; Chen, 2020; Doyle, 1983; Elmore, 2008; Reeves & Muller, 2005; Tekkumru-Kisa et al., 2020). Put differently, teachers' choice of learning tasks offer a means to understand how teachers teach and how it affects learning. Studies that explore learning tasks show that all learning tasks are not equal – they require different levels of effort from both learners and teachers and different patterns of interactions between learners, learners and the teacher and learners and LTSM (Alexander, 2009; Brophy & Alleman, 1991; Doyle, 1983; Tekkumru-Kisa et al., 2020). Doyle (1983) groups learning tasks into four types: memory tasks, procedural tasks, comprehension tasks and opinion tasks. Learning tasks that are cognitively demanding such as opinion tasks may be difficult for all learners to engage with and they may lose interest and become disruptive. These learning tasks may also be resisted by learners because of the uncertainty and subjective nature of the evaluation criteria used for assessing their products. Consequently, these higher-order learning tasks require more effort from teachers; they need to guide learners throughout the process of completion and make explicit the cognitive operations required to complete the learning tasks and justify the evaluation criteria used (Doyle, 1984). Chen (2022) contends that uncertainty and the related struggles are part of learning and developing reasoning skills. However, Chen (2022) differentiates between desirable and undesirable uncertainty, where undesirable uncertainty includes unclear expectations, vague directions for tasks, confusing goals that lead to unproductive struggle.

McNeil's (1982) work shows that in practice teachers choose learning tasks that allow them to maintain order in the classroom and to deliver the curriculum efficiently (at the prescribed pace). She found that teachers were not controlling the knowledge they make available to learners as she initially hypothesised but rather delivered the curriculum content in a way that would gain learners' compliance. She found that teachers teaching economics in four high schools in the USA reduced all the topics to "simplistic teacher-controlled information which required no reading or writing by the students, little or no student discussion and very little use of the school's extensive resources" (p. 3). McNeil (1982) refers to this teaching modality as "defensive teaching" where teachers present knowledge as simple facts through fragmentation, mystification, omission and simplification. They translate curriculum content into lists of facts and definitions that

learners must memorise and omit topics that will generate robust discussion likely to take time and disrupt classroom order and also take time. In doing so, teachers reduce the potential of learners contesting curriculum content and evaluative criteria that may generate intensive discussion and create conflict in the class, and in the process take away valuable teaching time. Teachers for example spent from zero to four and a-half minutes on the Vietnam war which ended a few years before the study. McNeil (1982, p. 23) found that teachers "intended never to return to the days of Vietnam and student rights protests when students shouted teachers down and when class discussion thereby, became "unbalanced"".

McNeil's (1982) study also shows that the school's culture of discipline and learner performance influence the learning tasks that teachers choose to deliver the curriculum and maintain classroom control. The study adds to the literature on teacher decision-making and planning that claims that a large part of teachers' work is to maintain a productive social environment; her contribution is that teachers' primary concern is to maintain classroom order to efficiently deliver the curriculum. Koornof (2017) in South Africa, while exploring how teachers use textbooks in primary schools, observed that teachers choose worksheets that are not cognitively demanding over textbooks, and that this choice is also a means to keep learners disciplined and focused.

The classroom routines and compacts between learners and teachers such as those described by McNeil (1982) produce a microculture in classrooms, something which Alexander (2009) observed:

> Teaching is not a series of random encounters. Together, students and teachers create and are defined by a micro culture. They develop procedures for regulating the complex dynamics of student–teacher and student–student relationships, the equivalent of law, custom, convention and public morality in civil society. This element we define as routine, rule and ritual. (2009, p. 929)

Haberman (1991, p. 292) argues that these ritualistic acts "have come to be conducted for their intrinsic value rather than to foster learning." He calls this teaching modality the "pedagogy of poverty" and claims that it is learners who are truly in charge of the lesson.

There is also a body of literature that looks at teacher preferences, particularly teachers' beliefs about the subject and its influence on teaching. Fang's (1996) review of the body of knowledge from the late seventies on how teachers' beliefs about the subject matter influence their teaching shows two competing views which he refers to as 'consistency' and 'inconsistency'. Consistency refers to the influence of teachers' theoretical model of teaching or of the subject they teach on their choice of actions in the classroom. Inconsistency refers to research that shows an inconsistent relationship between teachers' beliefs about the subject and their teaching. This latter category of research shows that teaching is affected not only by teachers' theoretical beliefs but by contextual variables such as classroom dynamics, their learners, school environment, available textbooks, theories on learning, and policies. The four-year study on teachers' theoretical concepts of reading and the teaching thereof by Duffy and Anderson (1984) shows that "while teachers did articulate theories of reading outside the classroom, their actual instructional practice was governed by a much more complex set of factors" (p. 98). These factors or variables include beliefs about mutual teacher-learner respect, classroom management and routine, the amount of assistance needed by learners of low or high ability and about the way learners learn.

Dahllof and Lundgren's (1970) study shows that teachers use a steering criterion group or reference group to set their pace of curriculum delivery. The steering criterion group is a small subset of the class ranging in achievement between the tenth and twenty-fifth percentile. When learners in the steering criterion group appear to understand the new curriculum content the teacher moves to the next topic.

In South Africa, classroom observations conducted prior to 1994 show that teachers used the threat of corporal punishment to maintain classroom order (Christie, 1998; Fleisch & Christie, 2004; Makhasane & Chikoko, 2016; Maphosa & Shumba, 2010; Marais & Meier, 2010; Morrell, 2001; Morrow, 1990; Naong, 2004; Rossouw, 2003; Segalo & Rambuda, 2018; Spreen & Vally, 2010; Taylor & Vinjevold, 1999). Since the abolition of corporal punishment in 1996, there is a growing body of research on teachers' perceptions about it and how it affects classroom control. This body of research indicates that teachers are struggling to maintain order in the classroom. They blame the abolition of corporal punishment for what they believe is an increase in

antisocial behaviour by learners, including learners disrupting classroom activities, fighting, disrespecting teachers, bullying, insulting, stealing, using bad language and vandalising school property. The studies by Naong (2004) in the Free State province and Maphosa and Shumba (2010) in the Eastern Cape province reveal that teachers feel that the abolition of corporal punishment has disempowered and stripped them of their authority to the extent that they are almost abdicating their responsibility for maintaining discipline and order in the class. Teachers feel that enforcing a view of corporal punishment as a violation of learners' human rights has had the effect of emboldening learners to disrespect teachers and disregard teachers' efforts to maintain order and discipline in class. Mayisela (2018) contends that teachers' support for corporal punishment and its persistence in schools is an outcome of teachers internalising it as an appropriate tool for achieving behavioural outcomes among learners such adhering to classroom rules.

Spreen and Vally (2010) argue that blaming the promotion of a human rights culture for undermining discipline and respect for authority is misplaced. They argue that teachers should instead hold the state accountable for failure to implement its own policies to address, among others overcrowded classrooms, resource shortages and violence in schools that create the challenges they face in classrooms. Christie (1998) argues that the top-down approach that the state used to promulgate the abolition of corporal punishment was unfair in that alternative ways of disciplining learners were not offered to schools that were struggling to function.

This literature on classroom interactions draws attention to the significant influence that maintaining order and stability in a lesson has on teachers' choice of teaching modality.

In summary, the three explanations inferred from the review of literature for the persistence of the teacher-centred modality seem to suggest that teachers' choice of teaching modality is mainly influenced by three categories of exogenous variables. The first category is the culture, norms and rules that structure the organisational form of mass schooling, its attendant curriculum and the pedagogic relation in modern class-based societies rooted in constitutional democracy. The second category is the diverse contexts in which teaching occurs with different histories, political dynamics and capabilities and resources of schools and education districts. The third category is the

nature of teaching which is interactive and the relationship between the teacher and a group of heterogeneous learners in a classroom. This relationship is influenced by how each of them see the other. The literature would suggest that teachers deal with the complexity of teaching by simplifying it. They reduce the number of variables they should consider by routinising the lesson which is centred around learning tasks. The choice of learning tasks is a function of how teachers perceive their learners and the subject matter, and how the rules of curriculum delivery are monitored with the associated rewards and sanctions for compliance and noncompliance.

The conclusion derived from the literature reviewed is teachers' choice of teaching modality is an outcome of how teachers cope with these exogenous variables that act in configuration and not in an additive way. Posed differently, teachers seem to collectively focus on a few shared exogenous variables that they believe have a significant impact on teaching. These shared exogenous variables in turn create the structure of teaching and produce the regularised pattern of classroom interactions – teacher-centred modality. As such, the teacher-centred modality is a satisfactory modality that allows teachers to control classroom interactions and deliver the curriculum 'efficiently'. It does not necessarily lead to optimum outcomes such as ensuring that all learners understand the curriculum content or that all learners conduct themselves so as to create classroom order to support learning.

This indicates that teaching is a situation where there is no optimal pedagogy. The next subsection discusses the concept of satisficing that describes the process of choosing a satisfactory teaching modality rather than an optimum one based on achievement of learning outcomes and an environment that supports learning.

2.3.4 Satisficing Teaching Modality in the Context of Complexity

Simon (1955) coined the term "satisficing" to refer to decision-making processes for accepting solutions that meet sufficient requirements of the situation – it is satisfactory to the decision-makers' aspirational level but does not produce an optimal outcome. This decision-making process often occurs in situations where it is difficult to identify the minmax (maximum or minimum) or optimal solutions. He posits the theory of bounded rationality (1955) to replace the concept of rational choice. Rational choice refers to the individual making the best (or optimal) decision in their self-interest.

Simon (1955) argues that it is unlikely for participants to have all the information (the complete set of alternative actions available) and the cognitive capabilities to rank all the possible outcomes of alternative actions in order of preferences. Consequently, he posits that actual decision-making processes is centred on satisfactory rather than optimal criteria. The criteria participants use for stopping the search is critical because it determines what they consider to be satisfactory and need no further searches for alternatives. Drawing on psychology, Simon (1955) refers to this criterion as the 'aspiration level'. In summary Simon defines the satisficing decision-making process as one "that sets an aspiration level, searches until an alternative is found that is satisfactory by the aspiration level criterion and selects that alternative" (1972, p. 168).

Furthermore, Simon (1955, 1972) recognises that the aspiration value is dynamic, it can shift downwards or upward from the initial value set that participant chose in a stable or static environment. As a result, McGinnis (2021) contends that:

> to understand the decisions made by individual leaders, analysts need to become familiar with the institutional procedures that determine the sequence of consideration, the source of each agent's aspiration level, and the intensity of time pressure felt by that actor. (p. 26)

Le Maistre and Pare (2010) use Simon's (1955, 1972, 1978) concept of satisficing to explain how beginner teachers learn to survive. Beginner teachers in their study report that veteran teachers stress that it is not possible to ensure that all learners learn all the time. This advice helps beginner teachers to feel less overwhelmed and ineffective. In the process beginner teachers learn the satisficing decision-making process. Similarly, Lindqvist et al. (2023)'s study with beginner teachers shows that "satisficing helped the new teachers adjust their expectations, demands, and performance to a realistic and 'good enough' level. By contrast, unrealistically high engagement or being detached and disengaged pushed them closer to phasing out [leaving the teaching profession]" (p. 629). Shavelson (1973) thus describes teaching as an act of decision-making:

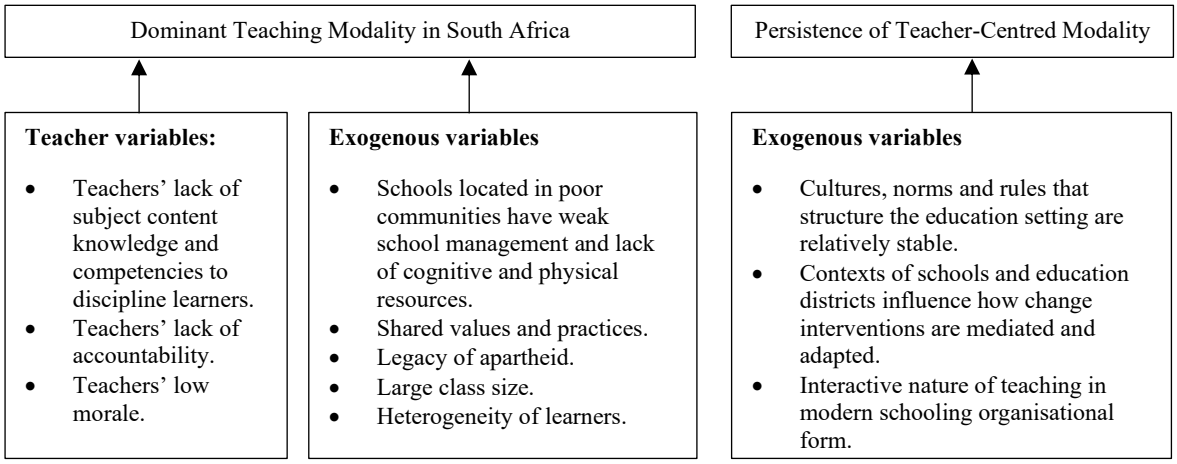
> Any teaching act is the result of a decision, whether conscious or unconscious, that the teacher makes after the complex cognitive processing of available information. This reasoning led to the hypothesis that the basic teaching skill is decision making. (p. 18)

2.4 Conclusion

The review of literature aimed to answer two questions, namely, what do we know about teaching modalities and the variables that influence teachers' choice of teaching modality in South African public primary schools and what do we know about the persistence of the teacher-centred modality.

Research in public primary school classrooms in South Africa shows that there is a dominant teaching modality that is characterised by a lack of genuine interaction between learners, learners and the teacher and learners and the LTSM about curriculum content, referred to as teacher-centred modality. The research suggests that both exogenous and teacher variables influence teachers' choice of teaching modality in South African public primary schools. The review of local and international literature suggests that there is a set of shared exogenous variables that influence teachers to choose the teacher-centred modality. These variables are relatively stable, explaining the persistence of the teacher-centred modality as illustrated in Figure 1.

Figure 1: Variables influencing teachers' choice of teaching modality.[22]



A notable finding from the review of literature is that educational researchers, while recognising the teacher-centred modality may be the outcome of shared values and practices and culture, do not have the means to study it. Far from teaching and the education setting, political economists from institutional economics offer a means to explore the structure of regularised social interactions - institutions. Elinor Ostrom

[22] Author's Analysis.

(2005) developed the IAD framework to explore institutions that also provides a metatheoretical language to describe and understand institutions. The next chapter describes the IAD framework and how it is used in this study.

CHAPTER 3: THEORETICAL FRAMEWORK

The review of literature presented in the previous chapter shows that the teacher-centred modality is an institution. Its persistence may be an outcome of shared exogenous variables including culture, norms, rules, context in which schools are located and the organisational form of modern schooling. The review of literature also shows that researchers studying teaching have not explored teaching as an institution. They have used various theories to describe teaching modalities and to infer reasons for teachers choosing them. However, there are no studies that explored the structure of teaching that incentivises teachers to continue choosing the teacher-centred modality. This study intends to apply the institutional analysis and development (IAD) framework that emerged from institutional economics to explore the teacher-centred modality as an institution.

The study intends to use the IAD framework to describe how teachers in public primary schools in South Africa teach and to understand how they perceive the structure of the teaching situation that incentivises them to choose the teacher-centred modality. In doing so, the study endeavours to make a unique contribution to the body of knowledge on the persistence of the teacher-centred modality. It also hopes to add to the growing literature on how institutional arrangements affect human behaviour and the application of the IAD framework in diverse settings.

This chapter presents a description of the IAD framework and how it is adapted to the study. It is organised into five sections. Section one discusses the reasons for applying the IAD framework to explore the persistence of the teacher-centred modality. This is followed by a description of the IAD framework and its components in section two. Section three describes the categories of exogenous variables that structure an action

situation. Section four discusses how the IAD framework is adapted and applied in this study. The last section provides concluding remarks.

3.1 Reasons for Selecting the IAD Framework

The IAD framework was created by Elinor Ostrom and her colleagues to explore how institutions affect human behaviour.[23] It is an elegant means to explore and understand the structure of complex social situations that give rise to regularised patterns of social interactions. The IAD framework shows how contextual or exogenous variables act in configuration to structure a situation and the relationship between the structure and the outcomes it produces. Furthermore, the IAD framework is multitiered – social systems like ecosystems are nested and part of networked and larger environments. As such it is appropriate for this study for three main reasons.

Firstly, the IAD framework as framework offers a metatheoretical language to describe and analyse the form of the teaching modality typical in South African public primary schools. This description can then be used to compare theories that explain its persistence and build a body of knowledge. The IAD metatheoretical language introduces few unique terms and these are carefully defined (McGinnis, 2011; Polksi & Ostrom, 1999; Ostrom, 1983, 1986, 2005, 2007, 2011). By contrast, the various theories of pedagogy used by researchers to describe teaching modalities introduce unique lexicons that make it difficult to compare descriptions and build a body of knowledge about the persistence of teaching modalities. Bernstein (1975, 1981, 1999, 2003, 2004), for example, creates a complex language for his grand theory of pedagogy as cultural production, reproduction and change in class-based societies. Furthermore, he does not define foundational concepts such as rules and principles precisely, resulting in them being used interchangeably. Similarly, educational researchers who draw on institutional theory from sociology and organisational development to show how culture, rules, values, customs, myths, shared strategies and norms structure the education setting use these terms interchangeably to explain homogeneous and persistent practices. As a result, it is difficult to discern which of these structure

[23] She worked at the Workshop in Political Theory and Policy Analysis at Indiana University (Bloomington). The workshop focuses on research that explores the effect of institutional arrangements on the incentives that people face and, consequently on the way people behave.

teaching and how they produce outcomes such as the persistence of the teacher-centred modality.

Secondly, the IAD framework is intrinsically sensitive to contexts; it posits that contextual variables also referred to as exogenous variables structure situations that produce regularised social interaction. Concomitantly, it does not ignore the influence of individual participants decision-making processes and preferences in situations where two or more participants are responsible for producing joint outcomes. Furthermore, as a framework it does not provide a predetermined list of exogenous variables that should be considered to analyse the structure of situations in various settings, nor does it offer a set of variables that influence participants' decision-making as theories and models do. Rather, it provides categories of exogenous variables that structure teaching and allows researchers to make and test assumptions about participants' decision-making. In doing so, it allows for digging deeper into how action situations are structured and how participants make decisions in diverse situations and settings. Moreover, as a multitiered framework, it allows for exploring how other situations linked to an action situation affect it. Consequently, the IAD framework is ideal for exploring why teachers continue to choose the teacher-centred modality.

Thirdly, the IAD framework allows for exploring teaching as a complex situation. It posits that exogenous variables act in configuration and not in an additive manner to structure an action situation. Generally, researchers have explored how single variables affect teaching and in the case of measured learner performance have formulated production functions that assume that exogenous variables act in an additive way (Bowles, 1970; Muttaqin et al., 2020). Furthermore, researchers exploring variables that affect teaching are often linked to specific disciplines and subdisciplines such as, among others, sociology of teaching, early grade reading, pedagogy, school change, curriculum studies, psychology, behavioural science and science education. The IAD framework, by considering how various exogenous variables acting in configuration structure a situation, allows for studying how variables interact and influence teaching. In doing so, it also encourages multidisciplinary research.

In summary, the IAD framework offers a means to explore and describe the form of the teaching modality that is typical in public primary schools in South Africa in a language

that is not linked to specific theories and normative views of what good teaching is, and develop an explanation for its persistence. The next section describes the IAD framework and introduces the metatheoretical language.

3.2 Institutional Analysis and Development Framework

The IAD framework is metatheoretical. It provides the elements and the relationship between them to describe and explore how institutions are produced, and a metatheoretical language (Polski & Ostrom, 1999; Ostrom, 2005). Ostrom (2005, 2011) differentiates between frameworks, theories and models. She sees these as nested concepts; models are nested in theories which are nested in frameworks. Theories select elements and variables from frameworks and make assumptions about their relationship which allow them to describe the phenomena, explain the processes and predict outcomes. As such, various theories from different disciplines may be compatible with a framework. This in turn allows for a multidisciplinary approach (Kroontz, 2003). Models are more limited than theories; they make precise assumptions about a small set of variables obtained from theories to make predictions.

The IAD framework has its roots in game theory, which has participants in positions who interact with one another using their own strategies and operating under a set of physical and behavioural rules (Cole, 2017; Frantz & Siddiki, 2021; Hoffman, 2018; McGinnis, 2011, 2021; Ostrom, 1986, 2005; Siddiki et al., 2019). It proposes that in frequently-occurring or repetitive social situations where two or more participants with diverse preferences interact with one another to produce outcomes, they create institutions to regulate their interactions to increase the predictability of interactions which, in turn, increases the stability of the situation. These institutions are structured by rules, norms and shared strategies that are spoken, written down or tacitly understood. They are linguistic statements about what participants must, must not and may do in a social situation which are referred to as institutional statements (Crawford & Ostrom, 1995). As such these institutional statements make explicit the opportunities and constraints that participants face in a social situation.

Crawford and Ostrom (1995) offer a syntax to analyse institutional statements and differentiate between rules, norms and shared strategies, further discussed in section four below. Rules are differentiated from norms and shared strategies because of their

"prescriptive force" (Ostrom, 1986); participants in a social situation have a shared understanding that if they break a rule, they will be held accountable by other participants or specialists who are responsible for monitoring the situation. Ostrom (1986) argues that rules should not be equated to formal law which she refers to as rules-in-form:

> formal laws may become rules when participants understand a law, at least tacitly, and are held accountable for breaking a law. Enforcement is necessary for a law to become a rule. Participants may design or evolve their own rules or follow rules designed by others. (p. 6)

Consequently, the rules that participants use to structure a situation are referred to as rules-in-use and are not necessarily rules-in-form. Cole (2017) suggests that there is a typology of rules-in-use in relation to their alignment with rules-in-form. When the rules-in-use are aligned to the rules-in-form then the situation is considered to be governed by the rule of law and the costs of maintaining order is insignificant. In situations where rules-in-use and rules-in-form are not in agreement the cost of ensuring that participants comply with the rules-in-form are significant. Additionally, participants in the action situation must have a shared understanding about the rules-in-use – the prescriptions about what actions and outcomes they are obligated, prohibited or permitted.

As discussed in chapter one, Ostrom (2005) posits that, like genes, rules-in-use do not fully determine the behaviour of humans; human behaviour is influenced by a plethora of other variables which she groups into biophysical and material conditions and attributes of the community.

The basic unit of analysis in the IAD framework is an action situation. Ostrom (2005, p. 14) describes it as a "social space where participants with diverse preferences interact, exchange goods and services, solve problems, dominate one another, or fight", among other things individuals do in the action situation. It is structured by rules-in-use that interact with influences from the biophysical and material world and attributes of the community – a set of dependent variables as illustrated in Figure 2.

Figure 2: Institutional analysis and development framework.[24]

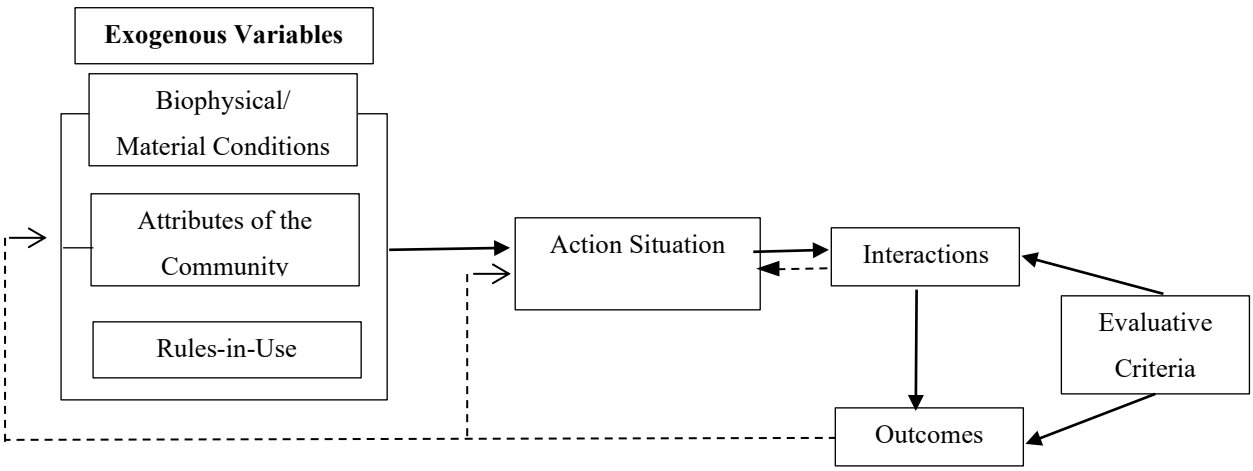


Figure 2 illustrates the components of the IAD framework and the relations between them. It shows that an action situation is structured by exogenous variables acting in configuration to create the opportunities and constraints participants believe they face. These opportunities and constraints create a set of allowable actions and outcomes participants are permitted to take and attain. The actions individual participants choose from the set generate the interactions observed in an action situation. These interactions produce the outcomes of an action situation. As such, the actions individual participants choose have consequences for themselves and others in an action situation. Ostrom (2005) stresses that an institutional analyst should make explicit their assumptions about human behaviour and how participants make decisions in an action situation; for example, whether they act in their own self-interest assumed by rational choice theory, or consider others in their decisions or what Sen (1977) refers to as other-regarding behaviour. The process participants use to choose actions, according to Ostrom depends on:

> 1. the way they acquire, process, represent, retain and use *information*;
>
> 2. the *valuation* that they assign to actions and outcomes; and
>
> 3. the processes (maximising, satisficing, or using heuristics) that participants use for *selecting* particular actions or strategic chains of actions in light of their resources. (2005, p. 103)

[24] Ostrom (2010, p. 6).

Figure 2 also shows that an action situation is dynamic; participants are not hopelessly trapped in perverse social situations that require external interventions to create new rules-in-form to change the patterns of interactions. Participants reflect and evaluate the interactions and outcomes and find enterprising means of changing how they interact with one another and the outcomes they jointly produce. The evaluations are feedback to change the structure of an action situation or how participants choose actions. If the interaction and outcomes are considered inappropriate and unfair, participants may change the structure of the action situation. If the interactions and outcomes are considered productive for all the participants, they may want to increase their commitment or maintain the status quo (no change in state variables). [25] The evaluative criteria generally include economic efficiency; equity; adaptability; resilience, and robustness; accountability and conformance to general morality, among others (Heikkila & Andersson, 2018; McGinnis, 2021; Ostrom, 2005). However, in closed societies, participants may find it more difficult to change the rules-in-use and may remain for a long time in situations that produce outcomes that are exploitative, unfair and unjust. Aligica and Boettke (2011) describe the IAD framework as fundamentally about exploring human choice of institutions to reduce chaos and uncertainty and make interactions between individuals and groups predictable. They see choice as: "being able to consider alternative possibilities and to select a course of action from among a range of such possibilities is not only a fundamental part of human behavior, but also the source of social order and social change" (p. 8).

Consequently, the IAD framework posits that human learning and institutions are continuous processes. One set of institutions to solve a particular problem may give rise to a new set of difficulties, and the cycle continues.

The relationship between the components in Figure 2 allows the IAD framework to predict outcomes. Ostrom (2005) posits that the IAD framework can make precise predictions in action situations that are tightly constrained, stable and where participants have complete information about the actions of all participants. In this case participants are motivated to use specific strategies that enable strong predictions. She cautions that

[25] State variables refer to the variables that participants choose to effect.

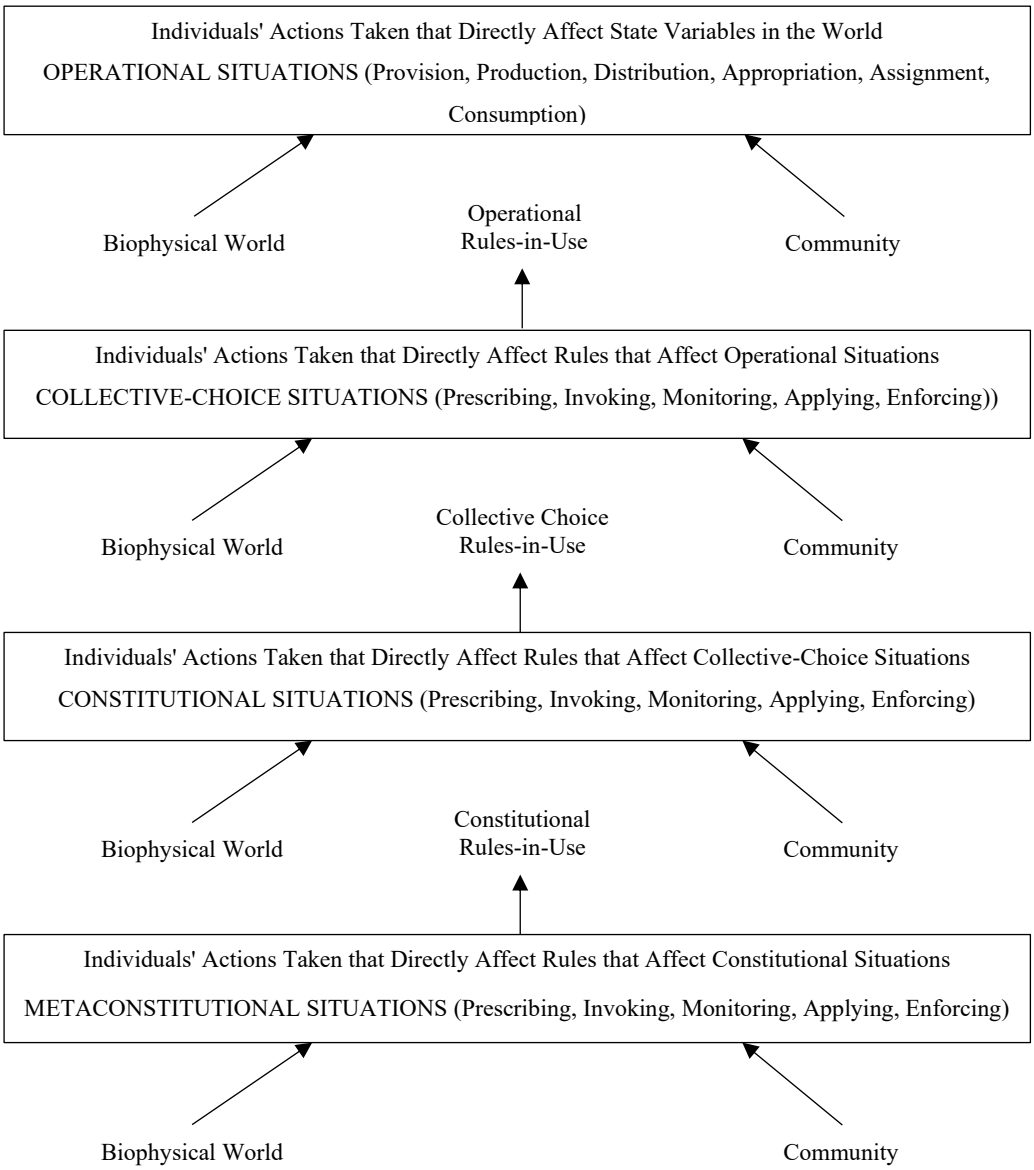
it is often difficult to make precise predictions about outcomes in action situations that are complex, interactive and conditional. She suggests that analysts should be satisfied with understanding the complexity of structures and the broad patterns of outcomes they produce.

While Figure 2 represents the components of the IAD framework to analyse a single action situation, the framework is multitiered. In other words, rules-in-use in one action situation may be linked to other action situations. These may be adjacent action situations where "an action situation Xi is adjacent to Y if the outcome of Xi directly influences the value of one or more of the working components of Y" (McGinnis, 2011b, p. 53). Action situations are also nested in a hierarchy – rules-in-use are nested in other rules-in-use that define how the first set of rules-in-use can be changed, as illustrated in Figure 3. According to Ostrom (2005), rules-in-use are formulated at metaconstitutional, constitutional, collective choice and operational levels:

> Operational rules directly affect day-to-day decisions made by the participants in any setting. These can change relatively rapidly—from day to day. Collective-choice rules affect operational activities and results through their effects in determining who is eligible to be a participant and the specific rules to be used in changing operational rules. These change at a much slower pace. Constitutional-choice rules first affect collective-choice activities by determining who is eligible to be a participant and the rules to be used in crafting the set of collective-choice rules that, in turn, affect the set of operational rules. (p. 58)

Ostrom (2005) describes the metaconstitutional level as the more primitive rules that can go back to the physical environment.

Figure 3: Levels of analysis and outcomes.[26]



The next section describes the categories of exogenous variables that structure an action situation.

3.3 Structure of an Action Situation

Figure 2 above shows that an action situation is structured by three categories of exogenous variables that create the opportunities and constraints that participants believe they face and therefore influence their choice of actions or the allowable action set. These are described below under the respective subheadings.

[26] Ostrom (2005, p. 59).

3.3.1 Rules-in-use

Ostrom (1986) argues that rules-in-use do not directly influence participants' behaviour but rather affect the structure of an action situation where participants choose actions that produce consequences for themselves and others. Rules-in-use do this by creating a set of allowable actions, for example, the rules-in-use that forbid certain actions and outcomes concomitantly permit participants to choose from the remaining actions and outcomes. Similarly, there are rules-in-use that enumerate the upper and lower bounds of permitted actions which create the set of actions and outcomes between these limits that are permitted. Consequently, Ostrom (1986, p. 6) argues that participants choose actions "from a set of allowable actions in light of the full set of incentives existing in the situation." Additionally, there are rules-in-use that obligate specific actions and outcomes that participants must choose and attain.

Rules-in-use structure an action situation by prescribing its elements as illustrated in Figure 4. According to Ostrom (2005), an action situation comprises seven elements and are related in the following manner:

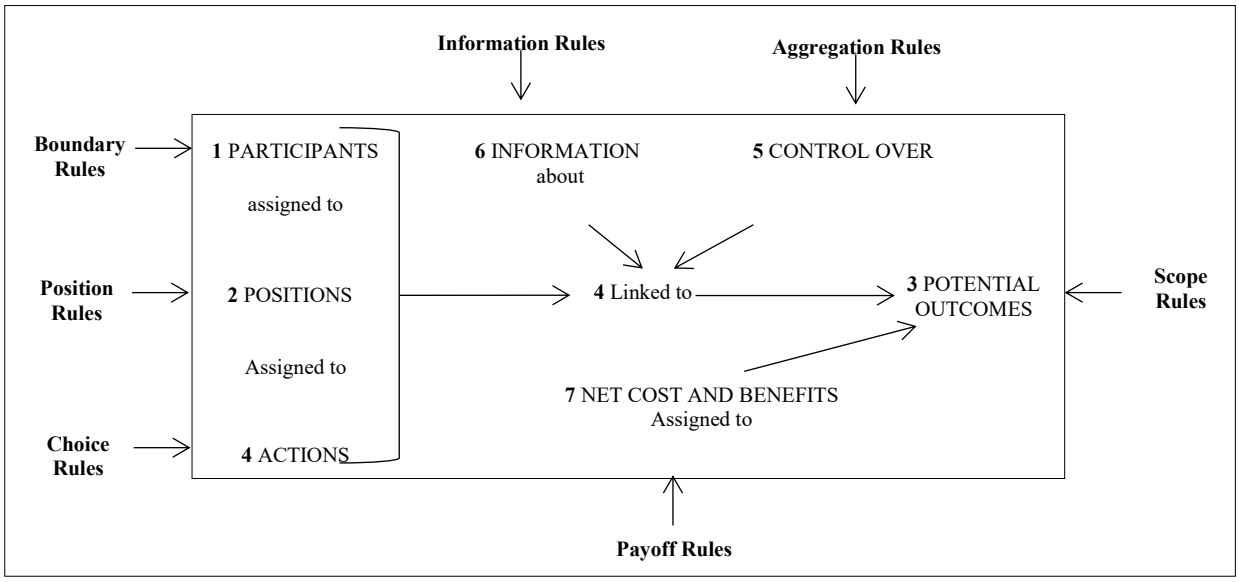
> *Participants* and *actions* are assigned to *positions*.
>
> *Outcomes* are linked to actions.
>
> *Information* is available about *action-outcome linkages*.
>
> *Control* is exercised over action-outcome linkages.
>
> *Costs and benefits* are assigned to action-outcome linkages. (p. 188)

Depending on the action situation, participants can be individual actors, corporations, nations, organisations, among others. They hold positions in an action situation that are assigned a set of allowable actions and outcomes. The assigned actions give participants their authority in an action situation. Outcomes are those that participants intend to achieve by their choice of actions. The action-outcome linkage is the mechanism or transformation function that participants believe transforms actions into outcomes.[27]

[27] The transformation function is not the same as a production function. Production functions are deterministic and do not allow for risk and uncertainty. Transformation functions are stochastic (random probability distribution), choice of actions have a high probability of positively affecting outcomes, and there remains uncertainty because of the actions of other participants or changes to exogenous variables.

Participants have total control when their choice of actions produce the intended outcome. They have partial control when the probability of an action producing the intended outcome is greater than zero and less than one. Ostrom (2005) defines the power of a participant in the action situation as "the value of the opportunity (the range in the outcomes afforded by the situation) times the extent of control" (p. 50). Participants' choice of actions is influenced by the information they have about the action situation. This includes information about other participants and their behaviour, how actions are linked to outcomes and the net cost and benefits for their choice of actions and the outcomes they intend to affect. In any action situation there are costs and benefits associated with actions and outcomes.

Figure 4: Different rule types enter action situations.[28]



As such, Ostrom (2005) classifies rules-in-use according to the elements of an action situation they prescribe:

> Position rules create positions (e.g., member of a legislature or a committee, voter, etc.). Boundary rules affect how individuals are assigned to or leave positions and how one situation is linked to other situations. Choice rules affect the assignment of particular action sets to positions. Aggregation rules affect the level of control that individual participants exercise at a linkage within or across

[28] Ostrom (2005, p. 189).

> situations. Information rules affect the level of information available in a situation about actions and the link between actions and outcome linkages. Payoff rules affect the benefits and costs assigned to outcomes given the actions chosen. Scope rules affect which outcomes must, must not, or may be affected within a domain. (p. 190)

There may be action situations where participants do not stipulate rules-in-use for all the seven elements of the action situation. Ostrom (2005) suggests in the absence of shared rules-in-use for a particular element of an action situation, the analyst should take the default position. She defines the default conditions as:

> those that would be used by a participant or an observer in a general legal system that presumed general freedom unless a rule specifically prohibited or mandated an act or event. These are the broadest default conditions that would be used in a common-law legal system as contrasted to a Roman Law system that presumes that most things are forbidden unless specifically permitted. (2005; p. 211)

Table 1 below lists the default condition for the seven elements of an action situation.

Table 1: Default conditions.[29]

Default Conditions	
Default Position Condition	One position exists.
Default Boundary Condition	Anyone can hold this position.
Default Choice Position	Each player can take any physically possible action.
Default Aggregation Condition	Players act independently. Physical relationships present in the situation determine the aggregation of individual moves into outcomes.*
Default Information Condition	Each player can communicate any information via any channel available to the player.

[29] Ostrom (2005, p. 211).

Default Conditions	
Default Payoff Condition	Any player can retain any outcome that the player can physically obtain and defend.
Default Scope Condition	Each player can affect any state of world that is physically possible.

**If a rule configuration contains only a default choice condition, the default aggregation condition must be present.*

3.3.2 Attributes of the Community

The attributes of the community category of exogenous variables includes all the social and cultural variables that characterise the community in which an action situation occurs. They include, among others the history of prior interactions, values of behaviour generally accepted in the community, the level of common understanding that potential participants share (or do not share) about the structure of the action situation, size and composition of the community, heterogeneity, trust that they will not be exploited and members will live up to their agreements, reciprocity that encourages cooperation and the extent of inequality of basic assets among those affected (Heikkila & Andersson, 2018; McGinnis, 2011a; Polski & Ostrom, 1998; Ostrom, 2005, 2010).

3.3.3 Biophysical and Material Conditions

The biophysical and material conditions category of exogenous variables refers to the attributes of the biophysical and material world being acted upon. In other words, the goods and services being produced, consumed and distributed and the physical world in which it occurs (Heikkila & Andersson, 2018; Ostrom, 2005). This in turn affects what actions are possible, what outcomes are attainable and how actions are linked to outcomes. Ostrom (2005) suggests that two attributes of goods and services have significant impact on how they are produced, consumed and distributed, namely their exclusion and subtractability:

> Exclusion relates to the difficulty of restricting those who benefit from the provision of a good or a service. Subtractability refers to the extent to which one individual's use subtracts from the availability of a good or service for consumption by others. (Ostrom, 2005, p. 23)

Furthermore, in some environments there are actions that are not physically possible because of natural laws or the limited sophistication of available technology (Ostrom, 2005). Polski and Ostrom (1998) suggest that the physical and material conditions category refers to physical and human resources and capabilities related to providing and producing goods and services. These conditions include production inputs such as labour and technology as well as sources of finance, storage and distribution.

However, the IAD framework has never been used to explore teaching. In the teaching situation, the biophysical and material conditions will need to include the existing knowledge about how learning occurs (including the neuroscience), the physical growth and development of children and its impact on learning, available technology (theories) about learning and teaching, the interactive nature of teaching and the organisational form of learning and teaching.

In summary, the three categories of exogenous variables (rules-in-use, attributes of the community and biophysical and material conditions) affect one another and act in configuration to create the structure of an action situation. It is this structure that creates the overall set of incentives participants believe they face in an action situation. Consequently, the IAD framework cautions policymakers about one-size-fits-all policies because rules-in-form that are effective in one location may have a different impact in other place. Therefore Ostrom (2005, p. 18) advises policymakers that "one cannot improve outcomes without knowing how the structure is itself produced."

The next section describes how the IAD framework was adapted in this study.

3.4 Applying the IAD Framework to the Study

In this study the action situation is the lesson, and as discussed earlier, the institution is the teacher-centred modality that is the dominant teaching modality in South African public primary schools. It occurs at the operational level where teachers and learners interact with one another about the curriculum, with the intention that teachers should assist learners learn the prescribed curriculum content.

The study adapted and applied the IAD framework in five ways to find answers to the research questions, namely: what is the form of the typical teaching modality in public

primary schools and what explains the persistence of the form of the typical teaching modality.

The study seeks to make an original contribution to the literature on the persistence of the teacher-centred modality by applying the IAD framework to analyse and understand how teachers perceive the structure of the lesson (action situation) that incentivises them to continue to choose the teacher-centred teaching modality. Consequently, the first way the study adapts and applies the IAD framework is through focusing on only two elements of the framework, namely the variables that teachers believe influence their choice of actions in a lesson and the interactions these actions generate in the class. The study does not explore the outcomes of the lessons or the evaluative criteria because it is beyond the scope of the purpose of the study – determining the effectiveness of the form of the typical teaching modality.

The second way in which the study applies the IAD framework is to describe the teaching modality which teachers use during lessons. In accordance with the IAD framework, it describes the teaching modality in terms of teachers' choice of actions in a lesson. This form of describing teaching modalities is not new. As discussed in the previous chapter Shavelson (1973) describes teaching as an act of decision-making; Bernstein (Bernstein and Solomon, 1999) suggests that it is the activities decided on by the teacher that create the pedagogic modalities and Doyle (1980) posits that classroom interactions are affected by teachers' choice of learning tasks. As such, the study explores teachers' actions in a lesson across grades, education phases, subjects and topics to describe the form of the typical teaching modality in public primary schools. It allows for analysing the actions to determine whether there are patterns of teachers' actions. In doing so, it allows for determining whether the assumption that the teacher-centred modality is an institution and to describe it – the form of the typical teaching modality. The study does not explore how teachers teach in a particular grade or subject or a specific skill such as teaching early-grade learning.

In accordance with the IAD framework, the lesson comprises at minimum two positions,[30] being the teacher and a learner who are assigned positions and a set of allowable actions respectively to choose from at any stage of decision-making in a lesson.[31] An example in this context is teachers being prohibited from administering corporal punishment. This study takes a teachers' perspective as discussed in the rationale for the study because there are few studies that explore teaching in South African public primary schools from this point of view. As discussed earlier, teaching is described as an act of decision-making (Shavelson, 1973), it is critical to understand why teachers choose a set of actions in a lesson. As such, the third way in which the study adapts and applies the IAD framework is to explore the actions of teachers and to identify the salient variables that teachers believe influence teaching, and which affect the way they perceive the structure of the lesson. This study does not consider how learners view the structure of the lesson. The focus of the study is on the persistence of the teacher-centred modality in light of the changing rules-in-form prescribing how teachers teach and how they relate to learners.

Fourthly, the study does not explore teachers' decision-making processes and their preferences and beliefs that influence teachers' choice of actions in a lesson. These include teacher attributes such as age, levels of qualifications, subject content knowledge, number of years of teaching experience and source of information and how they process it among other variables. While, the study recognises that teachers are heterogeneous, they also collectively choose actions that produce the teacher-centred teaching modality. This implies that it is an institution structured by a set of exogenous variables that all teachers believe have an impact on their choice of teaching modality. The study also does not make assumptions about human behaviour as discussed in section two above; whether teachers behave in their narrow self-interest or adhere to norms of other-regarding preferences including trust, solidarity and reciprocity.

[30] The operational rules-in-form in the South African Schools Act 84 of 1996 (SASA,1996) (National Department of Education (NDoE), 1996) prescribe the number of participants allocated to each position – the teacher: learner ratio.

[31] As discussed in the background and context section in chapter one there are numerous rules-in-form that prescribe the actions of teachers and learners in a lesson.

Furthermore, the study does not explore the process teachers use to make decisions in light of their resources such as maximising, satisficing or using heuristics.

Teachers were interviewed to identify the shared rules-in-use that they adopt to structure the lesson and other contextual variables that they consider facilitates or impedes teaching. Recognising that the rules-in-use may be tacit or taken for granted by teachers, the study asks teachers what are the must, must not and may be done in teaching are. It uses the institutional grammar tool (IGT) that Crawford and Ostrom (1995) developed to extract institutional statements from transcripts of interviews with teachers. The IGT is described in chapter four in the section that presents the coding and analysis of interview data.

The fifth way in which the study adapts and applies the IAD framework is to use the notion of institutions-in-use that teachers adopt to structure the lesson in place of rules-in-use. Institutions-in-use includes both rules and norms that teachers use to structure a lesson. As discussed earlier, rules-in-use have prescriptive force and are the "rules that are actually followed and respected by people" (Heikkila & Anderson, 2018, p. 314). While Ostrom (2007) sees norms as preferences of participants without the prescriptive force and are represented in:

> the preference function of the players as positive or negative parameters attached to their utility function that are invoked either by internal feelings of regret or internal satisfaction (personal norms) or by external observation of their behavior (community norms) that lead to shame or pride (p. 14).

The IGT also assists with identifying institutional statements and differentiating them; it posits that all institutional statements are expressed in the following syntax (Ostrom and Crawford, 2005):

> ATTRIBUTES [A] of participants who are OBLIGED, FORBIDDEN, OR PERMITTED [D] to ACT (or AFFECT an outcome) [AIM] under specified CONDITIONS [C], OR ELSE [O]. (p. 187)

In the ADICO syntax, rules and norms are distinguished from shared strategies by the presence or absence of a deontic: must, must not or may. Institutional statements with only attributes, aIm and conditions (AIC) are shared strategies. Institutional statements

are differentiated into norms and rules by the presence of external monitoring and sanctions. In the case of a rule, there are monitors who are authorised to monitor behaviour and to administer sanctions and who are subject to laws governing this work. Institutional statements that have all five components are rules (ADICO). Norms are internally monitored or self-monitored by participants because they are often tacit beliefs of what actions are obligated, forbidden or permitted. Institutional statements that do not have the OR ELSE component are norms – they only have four elements (ADIC).

The study by Hwa (2023) discussed in chapter two shows that teachers' actions are also influenced by shared norms and not only rules-in-use as strictly defined by Crawford and Ostrom (1995). Hwa (2023, p. 3) defines norms as "*dominant beliefs among teachers about the most suitable practices and priorities in their contexts*" and further described how norms influence behaviour:

> Norms may exert such influence through a variety of channels, such as triggering threats of direct social sanctions (Bicchieri, 2017), operating as focal points that prompt people to choose one equilibrium over others (Basu, 2018), shaping teachers' personal beliefs as they are socialised into the profession (Lortie, 1975; see also Bourdieu, 1977), among others (p. 4).

Drawing on Hwa's (2023) findings, the study includes both rules and norms as strictly defined by the IGT in institutions-in-use. This is similar to the way researchers used it in studying ecological restoration decision-making in the Chicago Wilderness region (Watkins & Westphal, 2015; Watkins et al., 2015). This study found "norms (and not just rules) to be prevalent and particularly meaningful guides for people's actions" (Watkins & Westphal, 2015, p. 1).

As discussed in chapter two, the study reviewed many studies that applied the IAD framework or that used the IGT to identify and analyse institutional statements. In South Africa, Hoffman's (2018) study of Council for the Development of Social Science Research in Africa (CODESRIA) as a case study in knowledge commons used the IAD framework to generate "buckets of questions" (2018, p. 70) related to rules-in-use. These include for example, what and who do they rule in and rule out, how do conflicts or points of convergence between formal and informal rules reflect inequalities

inside and outside the commons, and whether there are different rules and norms for different action arenas. However, she did not administer the same interview schedule to all her respondents. Her interview schedule was customized to the respondents' intellectual and governance contribution to CODESRIA. As a result, her data did not have lines of institutional statements governing CODESRIA.[32] She used thematic analysis to analyse the interview transcripts because it provides "an indication of the broad causes and character of regional inequalities in scholarship" (Hoffman, 2018, p. 27). As a result, the findings of her study revealed factors that shaped CODESRIA and not rules-in-use.

Moreover, the concept institutions-in-use is similar to Ostrom's (2005, p. 19) 'working rules': "the set of rules to which participants would make reference if asked to explain and justify their actions to fellow participants." These working rules are informed by rules-in-form that are codified such as laws, regulations and codes and social norms (Siddiki et al., 2019) or informal rules and norms that are not written down (Ostrom, 2005).

Consequently, the study categorises types of institutions-in-use that prescribe the seven elements of the action situation from a teachers' perspective and not an objective view of the structure of the action situation. The boundary institutions-in-use prescribe the attributes and competence teachers believe they should have to teach. Position institutions-in-use prescribe the number of positions teachers believe exists in the teaching action situation. Choice institutions-in-use are the set of actions that teachers believe they must, must not and may do in a lesson. Information institutions-in-use prescribe the kind of information teachers believe they require to make decisions in a lesson and how they obtain and share this information. Scope institutions-in-use prescribe the outcomes that teachers believe they should attain. Control institutions-in-use prescribe the control teachers believe they have over their actions and outcomes. Payoff institutions-in-use prescribe the rewards and sanctions teacher believe they will face for their choice of actions and outcomes.

[32] The transcript in the appendix was reviewed to look for institutional statements.

3.5 Conclusion

The IAD framework offers an elegant way of exploring action situations to understand the structure that produces institutions. In this study it is adapted to describe the form of the typical teaching modality in public primary schools and to understand how teachers perceive the structure of a lesson that incentivises them to choose this teaching modality. The following chapter describes the research design.

CHAPTER 4: RESEARCH DESIGN

The previous chapter described the institutional analysis and development (IAD) framework and how it was adapted for this study. The IAD framework was applied in this study to describe the form of the typical teaching modality and to understand how teachers perceive the structure of the lesson that incentivises them to choose this teaching modality over others. In doing so, the study intends to make an original contribution to the literature on the persistence of the teacher-centred modality in public primary schools in South Africa.

This chapter presents the research design of the study. It is organised into nine sections. The first section describes the naturalistic inquiry paradigm and the rationale for adopting it. The second section presents the instrumental case study methodology used to collect primary data and is followed in section three by a discussion on the selection of sample schools. Section four explains the research protocol and techniques used to collect primary data. The capturing, coding and analysis of the data are presented in section five. The trustworthiness of the study is discussed in section six, followed in section seven by the ethics of the study. Section eight lists the challenges faced in implementing the research design. The final section offers concluding remarks.

4.1 The Naturalistic Inquiry Paradigm

In education and generally in the social sciences, two inquiry paradigms dominate the design of research studies – rationalistic and naturalistic inquiry paradigms (Bryman, 1984; Queirós et al., 2017). These two inquiry paradigms are underpinned by different assumptions about knowledge.

The rationalistic inquiry paradigm assumes that there is a single objective reality that can be described and explained by a theory. A theory identifies the variables that affect

a phenomenon and makes assumptions about the relationship between them to describe the phenomenon, explain its processes and predict precise outcomes (Kivunja & Kuyini, 2017). The variables in a theory are treated as acting independently of each other and act in an additive manner. Theories in the rationalistic inquiry paradigm do not consider the influence of the contexts in which the social phenomena occur and the values and beliefs of participants. Theories are confirmed or refuted through hypothesis testing and positive findings are deemed generalisable across contexts and to all participants.

By contrast, the naturalistic inquiry paradigm assumes that there is no single theory or explanation for a social phenomenon and the contexts in which it occurs, and attributes of participants matter. It assumes that the variables that influence human behaviour affect one another. As such, research can provide reasonable explanations for the patterns of interactions and the outcomes that a social phenomenon produces, and not make precise predictions about the outcomes (Bryman, 1984; Guba & Lincoln, 1982; Queirós et al., 2017). Guba and Lincoln (1982) explain that in the naturalistic inquiry paradigm:

> an action may be explainable in terms of multiple interacting factors, events, and processes that shape it and are part of it; inquirers can, at best, establish plausible inferences about the patterns and webs of such shaping in any given case. (p. 368)

The naturalistic inquiry paradigm was used to design this study because the assumptions underpinning it are aligned to those of the IAD framework. The IAD framework as described in chapter three is a metatheoretical framework that shows the relationship between the context of an action situation and the outcomes it produces. It posits that action situations are structured by three categories of contextual variables that act in configuration to influence participants' choice of actions together with participants' values, beliefs, learning and decision-making processes.

In this study the IAD framework was applied to observe teachers' actions and the interactions they generate in a lesson and to identify the salient exogenous variables that teachers believe structure a lesson. The naturalistic inquiry paradigm provided the methodology and techniques to collect these naturalistic data (Doyle, 1977). Furthermore, the study considered the structure of the lesson from the teachers'

perspective to explain teachers' choice of actions so as to offer new insights into the persistence of the teacher-centred modality in public primary schools in South Africa. This is similar to how Guba and Lincoln (1982, p. 365) see researchers using the naturalistic inquiry paradigm: "the naturalist does not search for data that fit a theory but develops a theory to explain the data."

The limitations of the naturalistic inquiry paradigm are that the findings are not generalisable, and researchers' subjectivity may create biases in data collection and analysis (Bryman, 1984; Guba, 1981; Haradhan, 2018; Mack et al., 2005; Muzari et al., 2022; Teherani et al., 2015; Queirós et al., 2017). However, Guba and Lincoln (1982) argue that all inquiries are intrinsically value-bound by how the research problem is framed, choice of research paradigm and theory used to collect data. For them researcher subjectivity is considered an advantage because it encourages genuine interaction between the researcher and participants in an action situation to obtain in-depth views of participants' actions, reasons and decision-making processes.

In this study, where the teacher-centred modality was considered an institution, it was likely that the norms and rules that teachers adopted to structure the lesson were tacit and taken for granted. As such, it required the researcher to develop a rapport with teachers to probe the norms and rules that they use to regulate their behaviour in a lesson and to give them the confidence to share, in their own words what these were. The study also needed teachers and the researcher to have a shared understanding of the rules and norms and other contextual variables that affect the lesson. This required authentic dialogue between the researcher and teachers and for teachers to feel comfortable to ask questions about the study. Ostrom (2005) observed that:

> in empirical field studies, the researcher's task is to discover the linguistic statements that form the institutional basis for shared expectations and potentially for the observed regularity in behavior. Essentially, this entails discovering which of the components exist in these statements and the contents of those components. This frequently requires research employing qualitative methods including in-depth interviews or the reconstruction of historical and case materials. (p. 172)

The techniques offered by the naturalistic inquiry paradigm, such as in-depth interviews, allowed for genuine engagement between the researcher and teachers which also helped to temper the subjectivity of the researcher.

In relation to the non-generalisability of findings of research using the naturalistic inquiry paradigm, the IAD framework as discussed in chapter three assumes that it is unlikely to obtain optimal solutions and general explanations to fit action situations in diverse contexts. In the IAD framework it is sufficient for an analyst to understand the structure of an action situation that can describe and explain human behaviour in a specific context.

The instrumental case study methodology within the naturalistic inquiry paradigm, discussed in the next section was used to collect primary data.

4.2 Instrumental Case Study Methodology

The qualitative case study methodology within the naturalistic inquiry paradigm was selected as the research methodology because it allowed for studying phenomena in their contexts using a variety of data sources, in this study the teaching modality (Baxter & Jack, 2008; McMillan & Schumacher, 2010; Muzari et al., 2022). This, according to Muzari et al. (2022, p. 16) "has the potential to provide realistic opinions since it offers opportunities for in-depth inquiry through the use of multiple instruments." Additionally, the case study methodology allowed using qualitative data-gathering techniques to gather natural data (Meyer, 2001; Noor, 2008). These included the participant observation technique to collect data on teachers' choice of actions and the interactions these generated in a lesson and in-depth interview technique to speak to teachers about the salient variables that influence their teaching. The techniques are discussed in detail in section four below.

The instrumental case study methodology was selected to collect data over the intrinsic and collective case study methodologies because it allowed for exploring teaching modalities in different classes in a school (Baxter & Jack, 2008; McMillan & Schumacher, 2010). The intrinsic case study methodology is used to explore a particular case because of its unique characteristics such as teaching in a specific education phase, grade, subject or school. The collective case study methodology is mainly used for comparative purposes within and between cases to replicate findings across cases and

make predictions across similar cases. In the instrumental case study methodology, the phenomenon is central and the case is of secondary importance (Baxter & Jack, 2008; Kekeya, 2021). Kekeya (2021, p. 35) holds that "an instrumental case study involves exploring some general areas to understand rather than a particular case." As such, it was appropriate to obtain data to answer the two research questions: what is the form of the typical teaching modality and what are the reasons for the persistence of the teacher-centred modality.

There were three additional reasons for selecting the instrumental case study research methodology for the study. Firstly, the unit of analysis in this study was the lesson and the school was secondary. The instrumental case study research methodology allowed for observing lessons across educational phases, grades and subject disciplines within a school to determine whether there was a typical teaching modality and what form it took. It also permitted interviewing teachers across educational phases, grades and subject disciplines to determine whether there was a shared understanding of the salient variables that they believed structured the teaching action situation. Additionally, this combination of participant observation and interviews strengthened the data and increased the validity of the study (Becker & Geer, 1957; Denzin, 2012; Muzari et al., 2022).

Secondly, it allowed for determining whether the teaching modality and salient variables, especially norms and rules that structure a lesson, were influenced by the legacy of apartheid education policies and associated resourcing. The recent history of apartheid policy, underpinned by rules-in-form that privileged one 'race' and excluded other 'races' from access and participation as full citizens, continue to impact the uneven provision of quality public education to all South Africans in post-apartheid South Africa (Levy et al., 2016; Spaull, 2012; van der Berg, 2008). In this study the sample schools were selected based on their location, serving as a proxy for apartheid education departments; that is from historically African, Coloured and Indian townships in the same education district, so as to reduce the effects of variables linked to different districts. Racial categories were not used to refer to intrinsic human traits but rather as examples of a bureaucratic tool that was originally employed by the apartheid state to entrench racist policies and continues to be used in post-apartheid South Africa to

monitor redress and ensure the socioeconomic rights of all South Africans (Chisholm, 2012; Posel, 2001).

As discussed earlier, prior to 1994, basic education provision was fragmented by race and ethnicity and tightly controlled by the apartheid state (Chisholm, 2012; Morrow, 1990; Strauss, 2019). White schools received the largest share of public resources and Indian and Coloured schools were allocated more resources than African schools (Fiske & Ladd, 2003; Morrow, 1990). Teachers were required to deliver different curricula and to collaborate with entrenching a class society based on race. Chisholm (2012) described the period of apartheid education:

> Over a period of forty years a system of education was developed which attempted to exercise a degree of social control over the political and economic aspirations of black people, but also served to reproduce social relations of domination and subordination between black and white, male and female. (p. 89)

In accordance with institutional economics which the IAD framework is characterised as part of, rules and norms are rooted and shaped by history (Acemoglu & Robinson, 2020; David, 1994; Denzau & North 1994; McGinnis, 2021; North, 1994; Ostrom, 2005). David (1994, p. 205) describes norms and rules as "carriers of history"; new institutional arrangements are assimilated into previous and existing rules, norms and shared strategies. Institutional economists argue that this creates the phenomenon of path dependence (McGinnis, 2021; North, 1994).

While exploring institutions-in-use teachers adopt to structure a lesson as carriers of history was not the aim of the study, it would be naïve not to consider the legacy of apartheid. The instrumental case study methodology allowed for comparing whether there were differences in the teaching modality and institutions-in-use among teachers in the three sample schools that were historically administered by different apartheid education departments.

Thirdly, Reeves (2005) noted that it took between 15 to 20 observations to draw inferences about the teaching modality because teachers changed their teaching during an academic year. She used three visits over the first three terms of the school year in

her study that explored teaching modalities in Grade 6 mathematics lessons. The instrumental case study methodology allowed for observing teaching in different schools, education phases, grades and subjects and spending as much time as needed in a school at a given time. The study was conducted during the third term which was generally assumed by educationalists and researchers as being stable with respect to teaching compared to the first and fourth terms that were affected by the exigencies of a new academic year and the final examinations respectively. Furthermore, during the fieldwork there was constant checking for data saturation for both the choice of teachers' actions and exogenous variables that influenced their choice of teaching modality. Fusch and Ness (2015, p. 1409) defined data saturation as "no new data, no new themes, no new coding, and ability to replicate the study." The multiple education phases, grades and subjects together with conducting the visits to schools in consecutive weeks mitigated Reeves' (2005) concern about obtaining data that was typical of teachers' choice of actions.

4.3 Selection of Case Schools

The Johannesburg Central Education District was chosen because it covered historically African, Coloured and Indian townships.

A combination of purposive and convenience sampling (Golzar et al., 2022; Marshall, 1996) was used to identify the three sample schools. The observation of Golzar et al. (2022, p. 73) was that "researchers utilize a sample which is readily available and they have access to." The schools were roughly 40km from my home which made them easily accessible and reduced fieldwork costs. The schools were located within a 12km radius of each other. The geographic proximity of the schools to each other suggested that the biophysical characteristics of the townships in which each school was located were similar in relation to the natural environment and to public infrastructure such as road access to schools, water, sanitation and electricity in schools. For comparative purposes four criteria were used to ensure that the three sample schools had similar characteristics other than their historical apartheid education administrations. The selection criteria were:

1. the school management team must support the study;

2. the language of learning and teaching (LoLT) must be English because it was the language that the I was fluent in;
3. the socioeconomic profile of learners must be similar. The availability of a school feeding scheme was used as a proxy for the socioeconomic status of learners;
4. the size of the schools must be similar in terms of the total number of learners and teachers.

Three schools from the poorer parts of their respective townships and close to local informal settlements matched these criteria. Their individual characteristics are summarised in Table 2.

Table 2: Characteristics of the three sample schools as at August 2019.[33]

School/Description	School A (in Coloured Township)	School B (in African Township)	School C (in Indian Township)
Number of learners	1,082	1,247	1,493
Number of teachers	31+ part-time isiZulu teacher	34	36
Number of principals	1	1	1
Number of deputy principals	1	1	2
Number of administrators	2 + 5 learnerships	2 + 2 learnerships	3
Number of cleaners	4	4	No information
Community Work Programme	12 workers	0	0
School feeding scheme	National School Nutrition Programme (NSNP)	NSNP	Funded by a local faith-based organisation
Number of food handlers	6	7	Teachers

[33] School Databases.

School/Description	School A (in Coloured Township)	School B (in African Township)	School C (in Indian Township)
Number of learners on feeding scheme	Open to all but roughly 600 learners are registered on it[34]	Open to all 1,247 learners	Open to all but roughly 100 learners use it regularly
Number of Grade R learners	68	148	98
Number of Grade 1 learners	168	180	199
Number of Grade 2 learners	140	181	202
Number of Grade 3 learners	123	172	203
Number of Grade 4 learners	148	136	202
Number of Grade 5 learners	168	139	192
Number of Grade 6 learners	131	146	198
Number of Grade 7 learners	143	117	199

Learners in all three schools were from both the community where the schools were located and from surrounding areas, especially the informal settlements in proximity to the schools and townships. Similarly, across the three schools there were teachers who lived in the townships where the schools were located and others who lived outside the education district.

[34] According to the Principal from School A, there are parents in the school who believe that participating in the school feeding scheme will stigmatise them.

Schools A and C were officially ranked as Quintile 4 schools, while School B was ranked as a Quintile 1 School. The department of basic education (DBE) uses quintiles as a proxy for the socioeconomic status of their learners. Schools are divided into five quintiles: schools located in the poorest communities are classified as Quintile 1 and schools in the wealthiest areas are categorised as Quintile 5. This classification system did not precisely represent the learner demographics of a school because of the phenomena of busing learners from nearby areas (Neluvhola et al., 2022) and the rapid growth of informal settlements surrounding historically African, Coloured and Indian townships. The learners from School A and C travelled from communities that were categorised as quintile 1 and 2; consequently, these schools provided a school feeding programme. School A was part of NSNP while School C was not. According to the principal of School C none of the public schools in the historically Indian township were ranked as Quintile 1, 2 or 3 schools despite the fact that a significant proportion of learners in these schools came from poor households. A faith-based organisation consequently funded the school's nutrition programme.

School A had large grounds and three double-storey blocks of classrooms constructed with bricks and a single-storey row of offices housing the school's administration, kitchen, staffroom and sickbay. Two temporary Grade R classrooms were recently constructed of metal-like containers. [35] The school had a play area for foundation phase learners with a jungle gym and other obstacle-course equipment. There was no school hall or library, nor were there sports facilities. The grounds had old, established trees that provided shade to learners in the playground. The school principal and deputy principal were Coloured. The teaching staff comprised African, Coloured and Indian teachers. There were roughly an equal number of Coloured and African learners registered at the school. During the week before the fieldwork a roof cover and benches were constructed in the foundation phase block with funding provided by a state-owned enterprise. This construction provided a comfortable space for learners to eat their meals.

[35] In 2001, the National Department of Education made Grade R compulsory for five-year olds. As a result, public primary schools had to add classes to accommodate them. These were often constructed of metal containers because some schools had not space to add additional buildings.

Blocks of municipality-owned flats built in the 1980s for low-income families lined the perimeter on one side of the school. These flats were run-down and garbage was strewn all over. A secondary school and a block of formal houses were adjacent to the other two sides of the school. The back of the school faced a small 'industrial complex', which had a few retail stores and a centre for offering skills training to young people.

School B was constructed from metal; there were four single storey rows of classrooms, an administration row and three Grade R classrooms that were fenced off from the rest of the school. The school was not connected to municipal water and weekly tankers kept the school supplied with water on tap. There were no sports facilities, library or hall. The school grounds were huge with no trees or lawn, just red sand. Learners sat on the ground to eat their lunch. The school was surrounded by neatly kept formal houses and the environment around the school was clean – there was no litter or garbage strewn across the pavements. The principal, his deputy and the teachers were all African. All the learners registered at the school were African.

School C was created by combining two adjacent primary schools. Consequently, the school had huge grounds, 10 blocks of classrooms and an administration building. A local faith-based organisation converted the school's library into a media centre with computers and a smartboard. The Nelson Mandela Foundation stocked it with quality readers and books. There were netball, volleyball and soccer facilities. The school was surrounded by beautiful, established trees and had concrete tables and benches for learners to sit and eat their lunch during breaks. The school was situated on a main road in the township; a well-resourced mosque with a community hall and madrassah campus was one of the school's neighbours. The rest of the perimeter was surrounded by low-income homes built a long time ago. The streets were clean. The principal and her two deputies were Indian and lived in the community. Most of the teachers were Indian; the rest were African. The learners were mainly African, travelling from neighbouring African townships and the informal settlements surrounding the township.

4.4 Data-Gathering Techniques

As discussed above, two data collection techniques were used in the study: participant observation and in-depth interviews. These are discussed in the subsections below.

4.4.1 Participant Observation to Collect Data on Teachers' Choice of Actions and Classroom Interactions

The participant observation technique to collect data refers to the researcher participating in the activities under study either openly or covertly (Becker & Geer, 1957; Kawulich, 2005). The researcher spends an extended period of time with the participants involved to better understand their behaviours and choice of actions.

In this study participant observation was used to collect data on teachers' choice of actions, the interactions they generate between learners and between the teacher and learners in a single lesson. The researcher observed lessons openly. While the researcher did not participate in the events in a lesson, she walked around the classroom while learners were completing the assigned learning task. The researcher also responded to questions from learners and the teacher and in some instances assisted them when requested. One such incident occurred in School C when the teacher was called to the principal's office and the researcher was asked to oversee the learners who were completing a test. Drawing on Kawulich (2005, p. 9), the researcher's role was more of the observer as participant stance that "enables the researcher to participate in the group activities as desired, yet the main role of the researcher in this stance is to collect data, and the group being studied is aware of the researcher's observation activities."

The researcher observed one lesson per teacher during the week-long visit at each school, amounting to seven teachers in School A, 24 teachers in School B and 23 teachers in School C.

The majority of lessons observed were single periods. A period was the way schools divided the teaching day;[36] it was bounded by the school siren which signalled the beginning and end of each period. Teachers in the study organised delivery of the curriculum according to these periods. Each period was used to introduce new curriculum content. The lesson plans designed by the provincial department of education were also based on periods. Even in the foundation phase where the same teacher taught all learning areas and saw the same learners for the whole day, teachers

[36] The way the school academic day is divided into periods has its roots in the Carnegie units – a form of an academic accounting system (Tyack & Tobin, 1994).

appeared to use the school period to structure their time into lessons for each learning area and curriculum content within these. The periods across the three schools were between 30 and 45 minutes long. Consequently, lesson and period are used interchangeably in the thesis.

The study did not use an observation schedule with predetermined categories of types of actions teachers chose and the forms of interactions between learners and learners and the teacher. The study recorded all the teachers' actions in a lesson, the interactions these actions generated in a lesson and the observable outputs the interactions produced.

Teachers' choices of actions for each lesson were written in the form of thick descriptions and filled six field notebooks. All attempts were made to write down verbatim accounts of all the actions taken by teachers in a lesson. This included noting teachers' physical actions such as writing on the board, walking around the classroom, leaving the classroom as well as teachers' instructions, comments and exchanges and dialogue with learners.

Similarly, the interactions between learners and teachers were recorded in the form of thick descriptions in the field notebooks. However, the interactions between learners were more difficult to record because they occurred while the teacher was taking actions; the classrooms were generally overcrowded and it was impossible to observe all the interactions that occurred simultaneously. In the result the overall interactions between learners and specific interactions between learners that impacted on the rest of class were recorded. For each lesson observation notes were made with descriptions of the grade, subject, content topic, number of learners, learning and teaching support material (LTSM) available, classroom decorations, seating arrangements and sufficient furniture, all features Alexander (2005) refers to collectively as teaching invariants. Additionally, the physical description of the teacher's appearance and demeanour were recorded.

The outputs that were observable were recorded, such as learners writing in their exercise books or making an artefact.

In describing teachers' choice of actions, the use of value-laden terms were consciously avoided as far as possible, drawing on Doyle's (1977, p. 182) advice for collecting

naturalistic data: “a self-conscious effort is made to minimize preconceived notions about the meaning and interrelationships of behaviour in a particular situation.” Aspects of Milner’s (2007) researcher racial and cultural positionality framework were used to check the detailed notes at the end of the observations for any personal biases.[37]

The following protocol was followed for all lesson observations:

1. Confirm the period for the observation and consent for observation.
2. Enter the classroom at the beginning of the period.
3. Greet the teacher and the learners.
4. Take one minute to explain to the learners the reason for the visit.
5. Sit down immediately on any available chair to minimise disruption.
6. Remain seated during whole-class teaching.
7. Walk around the classroom when the teacher was not teaching the whole class.
8. Assist the teacher when requested.
9. Answer questions posed by learners.
10. Thank the learners and teacher at the end of the period.
11. At the end of the lesson, schedule an interview with the teacher at a convenient time.

The data-gathering protocol worked well and none of the teachers across the three sample schools raised concerns, suggesting that the observation had not adversely affected their teaching or themselves. A few teachers invited me to observe more of their lessons. However, interviews with teachers were planned to take place during their free periods rather than during their administration time at the end of the teaching day. This reduced the amount of time available for observations.

Teachers generally delivered the lessons in English and only in a few instances in School B teachers codeswitched. They codeswitched to explain questions in the assigned learning task that they considered cognitively more demanding. All the learners in School B were Black African who spoke different home languages. Two of

[37] Milner’s (2007) framework consists of four categories of reflection: researching the self, researching the self in relation to others, engaged reflection and representation and shifting from self to system. However, it was difficult to conduct the engaged reflection and representation because teachers had very limited time either to discuss the lesson observation notes or field notes or to participate in lengthy in-depth interviews.

the 54 lessons were not conducted in English – the Grade 5 isiZulu and Grade 7 Xitsonga lessons. In these two lessons the researcher recorded all the physical actions that teachers took including the interactions between the teacher and learners and the dominant physical actions between learners.

Despite these constraints a total of 54 lessons delivered by 54 teachers were observed across the three schools. The profile of the 54 lessons observed with respect to subject, grade and education phase is summarised in chapter five.

4.4.2 In-depth interviews to Collect Data on the Salient Variables that Structure Teaching

In-depth interviews were used to gather data on the salient variables that teachers believed influenced their teaching, including norms and rules – institutions-in-use. As a data-gathering technique, in-depth interviews allowed teachers time and opportunity to reflect on their contexts and the variables that shaped their teaching. It also permitted the researcher to probe participants' responses (Gill et al., 2008). In this study the in-depth interviews allowed the researcher to probe teachers' responses about their reasons for listing particular variables and to obtain more clarity about these. This allowed for a genuine conversation between the researcher and the teacher (Gill et al., 2008; Turner, 2010). Most importantly, it allowed teachers to express in their own words the institutional statements that structured their lessons. Allowing teachers to talk at length about the variables that affected their lessons helped the researcher to identify institutions-in-use that were tacit and taken for granted (Crawford & Ostrom, 1995; Ostrom, 2005). This was similar to how Shulman (1970) suggested researchers go about formulating a grammar of good teaching behaviour. Shulman's suggestion drew on the work of Chomsky to describe the work of a linguist when writing a new grammar. Chomsky (1965, as cited in Shulman, 1970) describes the process:

> When a linguist confronts the problem of writing a new grammar, he generally begins by collecting a large corpus of speech from selected informants who are designated a priori as "native speakers" of that language. It is then asserted that their capacity to perform the operations of speaking and hearing that language rest upon an underlying system of rules, of which they are generally not conscious, which constitute the grammatical competence of the speaker. The

> linguist's task, once he has collected his corpus of speech, is to subject the data to a series of careful analyses in order to discover and make explicit that underlying rule system, which is known as the grammar of the language. (p. 385)

The institutional statements identified through the semi-structured interviews in effect reveal how teachers perceive the opportunities and constraints that they face in a lesson.

It was initially hoped that the interviews would follow the lesson observation and would allow for a natural continuation by talking about the variables that teachers believed affected them in the lesson and their choice of actions. There would be no need for an interview schedule if this sequence was followed. However, after the first day of fieldwork in School A, it was noted that teachers did not have time for interviews immediately after the lesson which the researcher had observed because they had to continue teaching. They agreed to be interviewed instead in their free period or during the school breaks. This time constraint made it difficult to conduct unstructured in-depth interviews which were generally more time-consuming. Furthermore, teachers wanted to have some idea about the focus of the interview before they agreed to participate.

A semi-structured interview schedule was formulated after the first day of fieldwork. The semi-structured interview schedule comprised six grand tour questions (Brenner, 2006). The schedule was designed in a funnel shape format, starting with a large or broad question that teachers could easily speak about and then moving to more specific questions. The six questions were sufficiently broad, clear and precise to allow teachers to share the opportunities and constraints they face in terms of institutional statements. The semi-structured interview format was flexible enough to permit probing and follow-up questions and discussions. Table 3 below shows the link between the six grand tour questions and the three categories of exogenous variables. The six grand tour questions were:

1. What inspires your teaching? Please explain why?
2. What makes your teaching easy? Please explain why?
3. What makes your teaching difficult? Please explain why?
4. What are the must do's (obligation) in teaching? Please explain why?
5. What are the must not do's (prohibition) in teaching? Please explain why?

6. What are the may do's (permission) in teaching? Please explain why?

The two questions which were used to conclude the interview allowed teachers to reflect on the conversation and provided another opportunity to talk about the research if they felt uncomfortable about the dialogue:

- Is there anything else that you would like to add?
- Is there anything that you would like to ask me?

Table 3: Six grand tour questions by categories of exogenous variables.[38]

Grand Tour Questions	Categories of Exogenous Variables
What inspires your teaching? Please explain why?	Rules, norms and shared strategies that affect teachers' beliefs about teaching and delta parameters.
What makes your teaching easy? Please explain why?	Attributes of the community and material conditions.
What makes your teaching difficult? Please explain why?	
What are the must do's in teaching? Please explain why?	Rules-in-use.
What are the must not do's in teaching? Please explain why?	
What are the may do's in teaching? Please explain why?	

A total of 47 teachers were interviewed. Forty-five interviews with teachers were digitally recorded. Two teachers preferred not to be recorded. All the interviews were complemented with note-taking by hand in field notebooks. All the recordings were transcribed into MS Word. The notes from the two interviews were also typed (digitised) into MS Word. Appendix D has a copy of one of the transcripts.

[38] Author's categorisations.

Two small group interviews were conducted at School A and School C because the teachers arranged to be interviewed together at the end of the school day when they were sitting in the staff room while completing administrative tasks. These small group interviews were conducted with three and four teachers respectively.

The grade and subject profile of the teachers is presented in Chapter 6.

4.5 Data Capturing, Coding and Analysis

The data obtained from classroom observations were captured, coded and analysed separately from the data collected through in-depth interviews. These processes are described separately under the respective subheadings below.

4.5.1 Observation Data Set

The capturing, coding and analysis of observation data was conducted in seven iterations (Locke et al., 2022).

In the first iteration the handwritten observation notes were digitised in MS Word as approximate transcripts of the lessons.[39] The transcripts were formulated as a sequence of actions teachers chose in a lesson. They also included information about the lesson such as the grade, number of learners in the classroom, the topic of the lesson and a description of the classroom environment.

In the second iteration, all the actions teachers chose in a lesson were open coded. It followed the process described by Dey (1993) as reading and annotating. The open codes were verbatim descriptions of teachers' actions; for example, "the teacher writes the date on the chalkboard" or "the teacher shouts at a learner to keep quiet" or "the teacher instructs learners to open the textbook on page ten."

In the third iteration, all the open-coded actions were extracted from the transcripts and captured into a matrix in MX Excel spreadsheet noting school, education phase and frequency of occurrence.

In the fourth iteration, the constant comparative method employed in grounded theory (Walker and Myrick, 2006) was used to group the open-coded actions that had a similar

[39] See Appendix B for transcripts of three lessons. These three transcripts illustrate the lessons' typification.

purpose or outcome into categories of actions. All the different actions teachers chose to prepare learners for a lesson, for example, were categorised as "preparing learners for a lesson."[40] The categories of actions were constantly checked to establish whether an action could be placed in multiple categories of actions which, in turn, were constantly compared to prevent overlapping categories of actions or outcomes. Concomitantly, bracketing (Hutchinson, 2005) was used to ensure that the researcher's biases did not influence the creation of categories of actions. There were actions that teachers took when learners were not following their instructions and doing acts that could have potentially disrupted the lesson, and there were instances where the researcher felt that teachers' actions could be categorised as "verbally abusing learners." These actions were bracketed and the transcripts were reread to understand what the aim and outcome of the actions were intended to achieve. They were than included into two categories of actions, namely: 'focusing learners' attention" and 'regulating learners' behaviour'.

The grouping of open-coded actions produced 39 unique categories of actions. These categories of actions were stress-tested against descriptions of teaching in the systematic literature review of teaching and pedagogy (Locke et al., 2022); in other words, whether these categories of actions were observed in other research studies. The research on the use of questions in teaching indicated that teachers in the main use closed-ended questions (Alexander, 2010; Gall, 1970, 1984; Khoza and Msimanga, 2022) which served to confirm the description of the category of actions 'asking closed-ended questions'. This was similar to how Hwa (2023) stress-tested norms and contextual variables in her conceptual framework. The 39 categories of actions were further grouped into dimensions of teachers' work in the fifth iteration.[41] The dimensions of teachers' work included various aspects of teaching and the duties assigned to teachers working in a school.

[40] The category of actions "preparing learners for the lesson" included directing learners from the playground into the classroom to attend the lesson, permitting learners to enter the classroom to attend the lesson, writing the date and topic on the chalkboard to signal that the lesson has started, instructing learners to do physical exercises to energise them for the lesson, among others.

[41] The actions teachers chose in a lesson were grouped into the following dimensions of teachers' work: assessing teaching outcomes, controlling classroom interactions, delivering curriculum content, performing administration, permitting independent learning and solving practical problems.

Table 7 in Appendix C lists the 39 categories of actions by description of actions included in the categories of action, education phase, frequency of use and dimensions of teachers' work. The categories of actions were referred to as actions that teachers chose.

In the sixth iteration, frequency analysis was conducted on the 39 actions by school and education phase. This was done for three reasons: firstly, to determine whether there were patterns to teachers' behaviour – that is, whether their choice of actions produce a teaching modality; secondly, to establish whether there were patterns of teacher behaviour by school and education phase; and thirdly, to ascertain whether there were unique actions by school and education phase. The frequency analysis of actions is presented in chapter five.

In the seventh iteration, the initial descriptions of the actions in the lesson transcripts were changed to the 39 actions. Appendix B provides three sample lesson transcripts.

4.5.2 Interview Data Set

Two analytical tools were used to capture, code and analyse the interview data. Crawford and Ostrom's (1995) ADICO institutional grammar tool (IGT) was used to identify, code and analyse institutional statements. Thematic analysis was used to capture, code and analyse the attributes of the community and the biophysical and material conditions (Locke et al., 2022).

The IGT offers a syntax for identifying, categorising and analysing institutional statements (Bushouse et al., 2023; Dunlop et al., 2019; Pieper et al., 2023; Siddiki et al., 2019). Crawford and Ostrom (1995) called it ADICO syntax which is an acronym for the components of an institutional statement: Attributes, Deontic, a*I*m, Conditions, and Or else. According to Crawford and Ostrom (1995) all institutional statements have these components:

> regardless of how institutional statements are expressed in natural language, where
>
> A: Attributes is a holder for any value of a participant-level variable that distinguishes to who the institutional statement applies (e.g., 18 years of age,

female, college-educated, 1-year experience, or a specific position, such as employee or supervisor).

D: Deontic is the holder for the three modal verbs using deontic logic: *may* (permitted), *must/should* (obliged), and *must not/should not* (forbidden).

A*I*M is the holder that describes particular actions or outcomes to which the deontic is assigned.

C: Condition is the holder for those variables which define when, where, how, and to what extent the A*I*M is permitted, obligatory, or forbidden.

O: Or Else is the holder for those variables which define the sanctions to be imposed for not following a rule. (p. 584)

In summary all institutional statements are expressed in the following syntax (Ostrom & Crawford, 2005):

ATTRIBUTES [A] of participants who are OBLIGED, FORBIDDEN, OR PERMITTED [D] to ACT (or AFFECT an outcome) [*AI*M] under specified CONDITIONS [C], OR ELSE [O]. (p.187)

Basurto et al. (2010) provide an example of the above syntax for a rule:

"You must stop your car at a red light or the police officer will give you a traffic ticket." Attribute = "you"

Deontic = "must"

aIm = "stop your car"

Condition = "at a red light"

Or else = "the police officer will give you a traffic ticket." (p. 525)

Watkins and Westphal (2015) provide the following examples of norms and shared strategies from Ostrom (1996):

NORM: If you [Attribute] use the microwave [Condition], you must [Deontic] clean up your own mess [aIm]!

> STRATEGY: The person who places a phone call [Attribute] calls back [aIm] when the call gets disconnected [Condition]. (p. 3)

Crawford and Ostrom (1995) qualified the 'OR ELSE' component that defined an institutional statement as a rule. Rules had to meet three criteria:

1. The threat must be backed by monitoring, the range of punishments available and the authority and procedures for implementing an OR ELSE.
2. There must be institutional statements that affect the constraints and opportunities of those assigned to monitor the compliance of rules.
3. The OR ELSE must be formulated in a legitimate space used for discussing, prescribing, and arranging for enforcement of rules. This could be within government legislature or community forums or school governing bodies that formulate rules. Consequently, they noted that the severity of the sanction would also affect the outcome of the behaviour that was permitted, obligatory or forbidden.

Furthermore, the three deontic operators are interdefinable; the two remaining operators can be defined in terms of the primitive operator. If P (may) is the primitive deontic and 'a' is the action, it can be written as $[P][a_i]$ – one is permitted to do a_i. If it is a forbidden action, it can be written as $[F][a_i]$ or $[-P][a_i]$. If the negation of an action is forbidden then one is obliged to take the action.

Crawford and Ostrom (1995) argue that participants also comply with rules, norms and shared strategies because of their internal valuation of actions and outcomes. They may feel joy, shame, regret, guilt, and other emotions for complying with or disobeying rules, norms and shared strategies. They introduce the delta parameters to factor in the internal valuation of participants. Delta parameters capture the perceived emotional costs or benefits for obeying or disregarding an institutional statement. The valuation of the costs or benefits can be internal or external. In internal valuation the cost or benefits can be feelings of pride or disappointment; for example, when obeying or disregarding rules, norms or shared strategies. If the valuation occurs externally, their actions may be acknowledged and celebrated or frowned upon by their community or they could be sanctioned with material consequences. Put differently, delta parameters explain the emotional costs and benefits and OR ELSE covers the material costs and benefits.

Schlüter and Theesfeld (2010) suggest that understanding the delta parameters may be more helpful in formulating effective institutional statements and creating institutions. For Schlüter and Theesfeld, (2008), these delta parameters act as monitors through the internal monitoring of personal values or the external monitoring through socially acceptable behaviour preferences which make the OR ELSE element redundant. They argue that the difference between norms and rules is the monitoring – self-regulation, social-regulation, informal-regulation, and formal-regulation – thus begging the question whether "we follow rules mainly because of fines or because of delta parameters" (Schlüter & Theesfeld, 2008, p. 11).

As discussed in chapter three, this study included institutional statements that were strictly defined as rules and norm using the IGT and referred to them as institutions-in-use. This decision was influenced by the study that explored ecological restoration decision-making in the Chicago Wilderness region.[42] Researchers extracted 1,747 institutional statements from the transcripts that included rules, norms and shared strategies that influence the behaviour of participants in the Chicago Wilderness region.

The capturing, coding and analysing institutions-in-use was conducted in six iterations (Locke et al., 2022).

In the first iteration, the digital interview transcripts were coded line-by-line to differentiate between institutional statements and the other categories of variables. The IGT was used to identify institutional statements; all the sentences with a deontic (must/should/can, must not/should not/cannot, may) were underlined in interview transcripts as institutional statement.

In the second iteration, the sentences with a deontic in the interview transcripts were extracted, using MS Excel, captured on a spreadsheet into a matrix by school and frequency of mention.

In the third iteration, institutional statements were grouped by their a*I*m. As discussed in chapter three, a*I*m referred to the actions or outcomes that teachers were obligated,

[42] The Chicago Wilderness region spans 38 counties around the metropolitan area and its members include government departments, universities, volunteers and small land trusts. The study conducted 80 semi-structured interviews with decision-makers and observed over 50 meetings and ecological workdays across 10 case study organisations (Watkins et al., 2015; Watkins & Westphal, 2015).

prohibited or permitted to choose. Furthermore, the interdefinability of the three deontic operators was also used. If an institutional statement was spoken as a negation of an action that is forbidden it was grouped with an institutional statement for an action that was permitted or obligated (depending on the presence of the OR ELSE component). This process reduced the number of institutional statements initially captured in MS Excel to 126 unique institutions-in-use. Table 8 in Appendix E lists the 126 institutions-in-use by school, rule (institution-in-use) type and deontic.

The excerpt below from the transcript of the interview with the deputy principal from C illustrates the process used to identify institutions-in-use and to group them according to the a*I*m using the IGT. The excerpt was in response to the question: "what are the must do's in teaching?

The second iteration:

"You must be punctual. To me you can't stay absent. I don't stay absent. I feel that you have to be regular at school. You have to meet deadlines and time frames. You need to be prepared."

The third iteration:

Norm: Teachers must be punctual.

Norm: Teachers must attend school regularly.

Norm: Teachers must meet administration deadlines.

Norm: Teachers must be prepared.

The difficulty with the process of grouping institutional statements was that teachers used different verbs to describe the a*I*m. Furthermore, teachers did not differentiate between teaching and their broader role as a teacher working in a school which requires a range of added responsibilities such as extracurricular activities and administration, among others. These are referred to as dimensions of teachers' work mentioned in the subsection above. Consequently, there were institutions-in-use about these responsibilities that were indirectly related to teaching, such as "you have to meet deadlines and time frames" in the example above. The deputy principal was referring to reports that teachers must submit to the school management team.

To overcome the difficulties experienced with grouping institutional statements into type, two actions were taken. Firstly, all institutional statements were accepted because teachers' other responsibilities at school affected their teaching. Secondly, when the verb used for the a*I*m of an institutional statement was ambiguous, it was treated as a unique institution-in-use.

In the fourth iteration, the 126 institutions-in-use were grouped according to the dimensions of teachers' work. This was used to understand which of their roles and responsibilities were top of mind for teachers.

In the fifth iteration the 126 rules-in-use were grouped according to the seven types of rules (institutions-in-use) that prescribe the seven elements of an action situation as shown in Figure 4 in chapter three.

In the sixth iteration, frequency analysis was conducted on the institutions-in-use by school. The filtering revealed that there were 12 institutions-in-use listed by teachers across the sample schools and that these also occurred most frequently. They were extracted as the shared institutions-in-use by teachers to structure the lesson. The frequency analysis also revealed that there were unique institutions-in-use in the three sample schools.

Thematic analysis (Bruan and Clarke, 2012; Clarke and Braun, 2017; Guest et al., 2011) was used to analyse the interview data on the attributes of the community and biophysical and material conditions. It was conducted in four iterations.

In the first iteration, the data was open coded (Dey, 1993). Clarke and Braun (2017) refer to codes as the building blocks of themes. In this study the themes were used to identify variables that teachers believe impact teaching. This was followed by the grouping of the open-coded data using the constant comparative method (Walker & Myrick, 2006). The data was further sliced and spliced (Dey, 1993); new variables were created or data was moved to different variables. Bracketing (Hutchinson, 2005) was also used to mitigate researcher biases. In the third iteration, the variables were categorised into the two categories of exogenous variables, namely attributes of the community and material conditions. In the final iteration frequency analysis was

conducted to determine whether there were unique variables mentioned by teachers in a particular school and education phase.

4.6 Trustworthiness

The rigour of qualitative research is determined by its trustworthiness (Kakar et al., 2023). The model proposed by Guba (1981) was used to ensure the trustworthiness of the study. The model has four criteria that assess the trustworthiness of research using the naturalistic inquiry paradigm: credibility or internal validity, transferability or external validity, dependability or reliability, and confirmability or objectivity (Guba, 1981, Shenton, 2004; Kakar et al., 2023).

Credibility refers to the truth value (Guba, 1981) of the data. For naturalistic data it is generally done though member checks, going back to respondents to test the data and analysis. This was not possible due to the strict COVID 19 lockdowns that occurred in 2020. Nonetheless, the large quantity of data obtained and the intensive process used to analyse the data discussed above allowed for checking the veracity of the data. Additionally, at the end of each field day, the data was reviewed for saturation (Fusch & Ness, 2015). Data saturation was reached within the first couple of days at each of the schools.

Transferability refers to the data and related findings being applicable to diverse contexts. The observation data were written in thick descriptions of teachers' choice of actions which were easily comparable between lessons within schools and between schools. Similarly, the semi-structured interview schedule that comprised six grand tour questions was adhered to and allowed for comparative analysis within and between schools.

Dependability refers to the stability of the data. This includes the reproducibility of the data, whether researchers will obtain similar data when the study is replicated. The study did not use an instrument to capture teachers actions and documented all actions. Similarly, a semi-structured interview schedule with six grand tour questions captured teachers voices. Both techniques can be easily replicated. However, a challenge may arise when extracting institutional statements from transcripts of interviews that are conducted in multiple languages. In the naturalistic inquiry paradigm where data-

gathering instruments are less frequently used, Guba (1981) suggests using trackability. Changes in data can be trackable and accounted for and explained. Trackability in this study was achieved in two ways. Firstly, all the handwritten notes were digitised and digital recordings were transcribed. This allowed the researcher to access the original data and refer to it easily at any stage of data analysis and interpretation.

Secondly, the data capturing and analysis through distinct iterations and using digital tools such as MS Word and MS Excel helped with keeping track of the data and changes. Every iteration of data analysis was captured under a new file name that included the date of the revision.

Confirmability refers to ensuring that the data collected by the researcher was not biased or influenced by the researcher's predispositions. The research design used an instrumental case study methodology that allowed for gathering data through multiple techniques (Muzari et al., 2022) that ensured data triangulation (Becker and Geer, 1957; Denzin, 2012) in two ways. It collected two types of data, namely the actions teachers chose in a lesson (observation data) and teachers' views about the variables that affect teaching in their respective contexts (interview data). It also enabled the observation of a large number of lessons delivered by different teachers across schools, education phases, grades and subjects, and interviews with a sizeable sample of teachers from the three sample schools and who were teaching different educational phases, grades and subjects.

Furthermore, as discussed earlier in the subsection on participant observation Milner's (2007) positionality framework for education research was used to reflect on the handwritten notes and was complemented with bracketing (Hutchinson, 2005). Bracketing was used in reviewing the thick descriptions of the interactions between teacher and learners and learner and learner because the classroom dynamics were new to me. The last time I was in a classroom was a quarter of a century ago during apartheid. On the first day of fieldwork, I was overwhelmed by the constant buzz of learners talking, fighting, laughing together, harassing each other, borrowing stationery, stealing stationery, walking around, crawling under their desks. I was unsure what to make of this ambient noise and constant motion in all the classrooms. While I tried to describe the interactions as I saw them, I reviewed them at the end of each day for any

biases and bracketed those terms and adjectives to be revisited during coding and analysis.

4.7 Ethics

The Office of the Director of Education Research and Knowledge Management of the GDE gave approval for the study on the 23rd of May 2019, under the approval number 2019/41. The University of the Witwatersrand approved the study on the 21st of June 2019, assigning clearance number H19/06/41. Soft copies of the ethics clearance certificates are attached in Appendix A.

The confidentiality of schools and the teachers who participated in the study was accomplished by naming the schools as A, B and C, and describing the teachers by their positions – grade and subject they taught. All the data was secured on an external hard drive and not on the researcher's laptop. The files were password protected.

The fieldwork was conducted from the 5th to 23rd August 2019. The week-long fieldwork in each school was conducted consecutively to remove timing as an additional variable. Data collection took place over four days in School A - from the 5th to 8th August because the 9th of August was a public holiday (National Women's Day). The second week from the 12th to 16th August was spent at School B and during the third week from 19th to 23rd August data was collected at School C.

A data-gathering protocol was agreed with the principals at the three schools during the initial meetings requesting permission to undertake the study at their respective schools. The initial meetings with principals occurred in the first week of the third term of 2019 on receiving the ethics clearance certificates from the University of the Witwatersrand and the Gauteng Department of Education (GDE) at the end of June 2019.[43]

The data-gathering protocol included the principal introducing the researcher to the staff and informing them about the study and stressing to teachers that participation in the study was voluntary and that their names would remain confidential. The protocol stipulated that the researcher must arrive at the school at 7h30 in the morning, check in

[43] Copies of the ethics clearance certificates from the University of the Witwatersrand and the GDE are attached in Appendix A.

with the school secretary, obtain consent from teachers before observing their lessons and speaking to them and leave when the teachers left the school.

A notebook and pencil case were carried by hand rather than a laptop, tablet or bag during the fieldwork to minimise the researcher's impact on the lesson (intrusiveness and disruptiveness), especially during participant observation. The digital recorder was stored in the pencil case and the consent forms in the cover of the notebook. In doing so, the researcher could quietly blend in the classroom environment where learners all had books and pencil cases and sit quietly in the class and record observations unobtrusively.

4.8 Challenges with the Data Collection and Analysis

As indicated earlier one of the challenges I faced during the study was not being able to conduct checkbacks or engaged reflection and representation with the teachers who participated in the study to verify the lesson routine and the salient variables that emerged from the data analyses that structured teaching. This was due to the various levels of COVID-19 lockdowns that affected public schooling in 2020 and 2021. In light of the efforts I made, as discussed above, to ensure the trustworthiness of the study, I can say with confidence that the 12 shared institutions-in-use that emerged from the analyses of interview data are those that teachers "know and use" (Ostrom, 2005, p. 172).

During the study I faced two additional challenges. Teachers did not have much free time during the teaching day, and many did not want to be interviewed during the administration or lesson planning time when the learners had left the school, as discussed earlier. This constraint impacted the study in two ways. First, teachers preferred to talk during the periods that they were not allocated classes, which ranged from 35 minutes to 45 minutes. Consequently, there was not sufficient time to probe responses on all the grand tour questions. More of the interview time was allocated to the questions related to the institutions-in-use (the must do, must not do, and may do in teaching) than to those about the other contextual variables. Second, a few teachers preferred being observed only because it did not require extra time. Consequently, there were more lesson observations than interviews.

The second difficulty was that teachers struggled to answer the grand tour question:

> "What are the may do's in teaching? Please explain why?"

They easily listed what they were obligated to do (must do's) and prohibited to do (must not do's); however, they struggled to enumerate the may do's in teaching. It appeared that what they are permitted to do was an alien concept. I offered numerous examples from the lessons that I had observed to concretise the notion of permitted. One example was 'shouting' at learners could be considered a 'may do' because it was not obligated nor prohibited, but accepted as part of regulating and sanctioning learners' behaviour and focusing their attention. Even though nearly all the teachers observed shouted at their learners, many believed that it was a 'must not do' (prohibition) in the interviews. Similarly, another example of 'may do' that emerged from the observation data was that teachers accepted less written work from their 'slow learners'. In using this example to explain 'may do', teachers reported that 'all learners must learn (it is a must do). While they made compromises in their teaching and operated in the 'may do' area, cognitively and emotionally they seemed to disagree and preferred to view teaching within a binary framework of must do's and must not do's.

4.9 Conclusion

The study selected the naturalistic inquiry research paradigm because the underlying assumptions were aligned to the IAD framework and afforded a means to operationalise it to teaching and to collect data on the contextual variables that teachers believed structured lessons. It applied the instrumental case study methodology to determine whether the structure of teaching was influenced by the history of the different apartheid school administrations. The observation of a large number of lessons delivered by different teachers and the interviews conducted with teachers across three schools, grades and subjects strengthened the validity of the data. This was combined with ways to mitigate researcher bias such as reflexivity and bracketing.

The next two chapters present the analysis of the data collected. Chapter five presents the analysis of teachers' choice of actions obtained from the lesson observations, while chapter six is an analysis of the exogenous variables that structure teaching.

CHAPTER 5: TEACHERS' CHOICE OF ACTIONS IN A LESSON

The previous chapter described the design of the study to collect naturalistic data to answer the two research questions. It showed how the participant observation technique was employed to collect naturalistic data about teachers' choice of actions in a lesson and how it was analysed to answer the research question: what is the form of the typical teaching modality in public primary schools?

This chapter presents the analysis of teachers' choice of actions in the 54 lessons observed. The chapter is organised into seven sections. The profile of the lessons observed by sample school, grade and subject is presented in the first section. The second section presents the frequency analysis of the cumulative 39 actions that teachers chose across the 54 lessons. Section three describes the set of frequently chosen actions. Section four describes the form of the typical teaching modality in the three sample schools. Sections five and six describe and analyse the classroom interactions and outputs produced by the teaching modality. The final section offers concluding remarks.

5.1 Profile of Lessons Observed

Table 4 below summarises the lessons observed by school and grade. Each of the 54 lessons was delivered by a different teacher. Most lessons observed were in foundation phase (43%), followed by intermediate phase (35%) and roughly one-fifth (22%) from senior phase or Grade 7 classes. Additionally, one third of the lessons observed were language (literacy) lessons (33%), followed by mathematics (numeracy) (26%), natural science and technology (19%), life skills (15%), economic and management sciences (4%) and social sciences (4%).

The lessons observed were not representative of the grade and subjects in the sample schools because teachers' participation was voluntary. Nonetheless, the large number of

lessons observed across grades and subjects provided a good sample for exploring teachers' choice of actions in a lesson, and to determine whether there were patterns of classroom interactions in the sample schools and to describe these.

Table 4: Lessons observed by grade and school.[44]

Grades	School A (Located in Historical Coloured Township)[45]	School B (Located in Historical African Township)	School C (Located in Historical Indian Township)	Total
Grade R	0	1	2	3
Grade 1	1	4	4	9
Grade 2	1	2	1	4
Grade 3	0	3	4	7
Grade 4	1	2	3	6
Grade 5	1	5	3	9
Grade 6	1	2	1	4
Grade 7	2	5	5	12
Total	**7**	**24**	**23**	**54**

Fewer lessons were observed in School A for three reasons. Firstly, the principal of School A requested that the first day of fieldwork be spent shadowing the head of department for Grade 2 and based on her recommendations she would give permission to observe other teachers. While all the Grade 2 teacher's actions and the classroom interactions these generated across the school day was documented, only one of the lessons from the first day was selected for analysis to ensure consistency of observation data across schools. Secondly, the fieldwork week in School A had four school days instead of the usual five because Friday was a public holiday – National Women's Day. Thirdly, the school day ended earlier on the Thursday as the early afternoon was dedicated to a lunch for all the women staff members as part of Women's Day

[44] Observation field notes and consent forms completed by teachers.

[45] In this study the categories do not refer to race as an intrinsic human trait but rather as a bureaucratic tool that was originally employed by the apartheid state to entrench racist rules-in-form and policies and continue to be used in post-apartheid South Africa to monitor redress and ensure the socioeconomic rights of all South Africans (Posel, 2001).

celebrations. This did not affect the data because, as discussed in chapter four, data saturation was reached in two days at all three schools.

The next section presents the frequency analyses of teachers' choice of actions in a lesson.

5.2 Frequency Analyses of the Teachers' Actions

Frequency analysis of the cumulative set of 39 unique actions observed across 54 lessons and three sample schools was conducted to determine whether there are patterns to teachers' behaviour and whether these patterns of behaviour are unique to schools and education phases.[46] It was also conducted to identify the dimensions of teachers' work that is central in a lesson.

The analysis of actions by dimensions of teachers' work reveals that teachers use the 39 unique actions to fulfil six dimensions of their work, namely: delivering the curriculum (17 actions), controlling classroom interactions (nine actions), assessing teaching outcomes (nine actions), performing administration (two actions), permitting independent learning (one action) and solving practical problems (one action).

Frequency analysis of the cumulative set of actions by teachers' choice of actions shows that they choose 16 actions frequently. These frequently chosen actions are observed in 90% of the lessons and the remaining 23 (59%) actions are observed in less than 10% of lessons.

The 17 actions teachers choose to deliver the curriculum may suggest that teachers have a large repertoire of actions to teach curriculum content. However, the frequency analysis shows that 10 of the 17 actions are observed in less than 10% of the lessons. The action 'using LTSM (learning and teaching support material) for demonstrations' for example occurs in only 9 % of lessons. Analogously, five of nine actions teachers choose to assess learners and five of the nine actions teachers choose to control classroom interactions occur in less than 10% of the lesson.

[46] The full set of 39 actions by school, education phase and dimensions of teachers' work is summarised in Table 7 in Appendix C.

The large percentage of unique actions observed in 10% of lessons suggests that teachers are heterogeneous in their preferences for actions in the six dimensions of their work and how they view their role as teachers. Four teachers for example choose the action 'calling learners to prayer'[47] to begin or conclude lessons, three teachers choose the action 'reminding learners of classroom protocols' and three teachers choose the action 'permitting learners to work together'.

Frequency analysis by education phase shows that teachers in foundation phase choose the action 'doing a learning task together' more frequently, while teachers in intermediate and senior phases choose the actions 'preparing learners for the lesson' and 'correcting learning task products' more frequently.

Frequency analysis of actions by school reveals that there are no actions that are unique to a particular sample school - there are no actions that are frequently chosen by teachers from one school compared to the others. The observation data indicates a similarity in actions that are frequently chosen by teachers across the sample schools, despite their histories of separate racially-based administrations during apartheid. This suggests that more than two decades after the dismantling of the apartheid school system, teachers' choice of actions in a lesson are not influenced by the legacy of apartheid. The analysis suggests that most teachers in the sample schools which are located in poor communities choose actions from the set of 16 frequently chosen actions.

The action 'conducting formal assessment' is excluded from the analysis of the set of 16 frequently chosen actions because it was part of the third-term examinations and was not a routine feature of daily lessons. The fifteen actions that occur in 90% of the lessons observed provides insights into the form of the typical teaching modality in the three sample schools which is the focus of the study. This does not negate the heterogeneity of teachers and that in 10% of the lessons observed teachers did choose actions that were different, such as 'permitting learners to work together' to complete a learning task.

The next subsection describes and analyses the set of 15 frequently chosen actions.

[47] The prayers focus on being grateful for a safe and productive day.

5.3 Set of 15 Frequently Chosen Actions

The set of 15 frequently chosen actions is centred on four dimensions of teachers' work, namely delivering the curriculum, controlling classroom interactions, assessing teaching outcomes and solving practical problems. The 15 actions are analysed below under the dimensions of teachers' work.

5.3.1 Delivering the Curriculum Content

Teachers appear to deliver the curriculum content in the sequence and at the pace prescribed by the curriculum and assessment policy statement (CAPS). The Grade 7 English teachers in schools B and C, for example, were delivering the same curriculum content – how to conduct a meeting and take minutes of a meeting. In the Grade 7 English lesson in School B the teacher introduced the learners to the concept of a meeting. A week later in the Grade 7 English lesson in School C the teacher assigned a learning task to "conduct a meeting and produce minutes of the meeting". Similarly, teachers in the Grade R lessons in School C observed during consecutive periods on the same day assigned the same learning tasks to the various groups of learners. In both Grade R lessons, teachers assigned different learning tasks to the various groups of learners and rotated the tasks in the following period. Consequently, teachers in the two lessons delivered the same curriculum content.

The description and analysis of the seven actions teachers frequently chose to deliver the curriculum are presented below in the order of frequency that teachers used them.

Doing a learning task together: This action requires the whole class to participate in doing a learning task together, such as counting, singing, spelling, repeating vocabulary, doing physical exercises, telling a story for digraphs, reading graded readers, revising mathematical algorithms and answering questions from past exam papers. This action is more frequently used by teachers in the foundation phase.

Teachers in the foundation phase choose the 'doing a learning task together' action to begin the day and the lesson, transition between subjects, and to revise basic concepts such as counting in different multiples or reciting a song. It requires the whole class to mimic the teacher's movement and words (singing, counting) which is referred to as 'choral recitation' or 'chorusing' (Hoadley, 2012, 2018, 2024; Spreen & Vally, 2010). It

allows teachers to obtain all learners' attention. The Grade 1 teacher in School B, for example, used it to begin the school day:

> The first action for the morning is a welcome song in English that the learners sing together with the teacher. They stand next to their desks while singing. This is followed by singing the popular rhyme; "If you're happy and you know it, clap your hands. Clap, Clap." The singing is accompanied by body actions related to the song. This is followed by counting from one to 20, then backwards from 20 to one, then counting in 2's to 20, followed by counting in fives to 100. The fourth action is singing an achievement song about being a star.
>
> While learners are singing the achievement song, the teacher chooses the second action of writing the week, day, date and "ch" on the chalkboard (excerpt from Grade 1 Lesson from School B).

Teachers in the intermediate and senior phases choose the action 'doing a learning task together' to complete a learning task and revise exam papers and mathematical algorithms. It takes the form of the teacher standing in front of the class, the teacher or the class reading a question from the textbook/assessment sheet, the teacher explaining the question and asking learners closed-ended questions that will lead them to the answer or what Khoza and Msimanga (2024) call rejoinders, and in the case of mathematics and physical sciences explaining the algorithms or processes for learners to apply. It is a form of whole-class teaching that requires learners to listen to the teacher's explanation, answer a battery of rejoinders or questions and answer the question in their exercise books. Not all learners participate in this form of the 'doing a learning task together' action. A conspicuous case is the Grade 7 mathematics lesson in School B where the teacher did not gain all learners' participation. In this lesson she chose the 'doing a learning task together' action to complete a learning task from the department of basic education (DBE) workbook. The learning task comprised answering a list of questions on linear graphs/functions.[48] She stood in front of the classroom and instructed the class to read each question aloud in chorus, explained each question, used the chalkboard to draw or list key concepts like "intersection" and "axis" and asked

[48] Prior to the lesson, the teacher told the researcher that she does two pages of the DBE mathematics workbook per lesson as a way of complying with the prescribed pace of curriculum delivery.

learners a series of closed-ended questions to help them to arrive at the answer. Learners then wrote down the correct answer in the DBE workbook. Learners' interaction and participation varied. One group (roughly a third) of learners fully complied with the teachers' instructions, a smaller group did not participate in the action and appeared to be socialising with one another and a third group partially engaged in the action. The latter group seemed to include at least half of the class. They listened to the teacher, answered questions, walked around the classroom to borrow stationery to write down the answer in the DBE workbook, helped other learners with writing down the correct answer or explained the process to obtain the correct answer and also distracted their neighbours and talked about matters unrelated to the lesson. As a result of not obtaining all learners' attention to comply with her instructions, the teacher constantly shouted at learners to focus their attention on the learning task and to ensure that they behaved in accordance with her instructions. In one of her actions for 'regulating learners' behaviour' she insulted a learner's stuttering; he was part of the group that did not participate in the lesson and ignored all her instructions.

There were a few exceptions where learners did comply with the instructions in 'doing a learning task together'. The Grade 7 mathematics lesson in School C is one example where the teacher chose the action of 'doing a learning task together' to revise a few mathematical algorithms in preparation for the third-term formal assessment that was planned for the next mathematics lesson. He followed the sequence of actions for 'doing a learning task together'. He stood in front of the class and asked a question related to a specific mathematical algorithm. All the learners were quiet, they raised their hands to volunteer answers and when instructed answered in chorus. One question, for example, was to solve the linear equation: $2p+12=58$. He asked the class "when there is no operational sign between a variable and a number?" The class answered in chorus "multiplication."

Using the chalkboard: In this action teachers use the chalkboard to explain and draw diagrams illustrating processes, write new vocabulary, list concepts and terms to stress their importance, illustrate mathematical algorithms and simplify sophisticated ideas to a list of facts. These are in the main offloaded from the textbook (Leshota & Adler, 2014). Learners are required to listen to the teacher explain the concepts listed on the chalkboard.

In the Grade 1 lesson from School B, for example, the teacher chose the 'using the chalkboard' to introduce the digraph "ch":

> The teacher writes week 6, Monday 12 August and "ch" on the chalkboard. She asks the class to list all the words that they know that start with "ch". Learners are very enthusiastic to answer, nearly all volunteer. They list chair, chalk, chicken, change, and chocolate. One learner volunteers a word not starting with "ch", the teacher corrects the learner without exploring the learner's reasons for suggesting the word.[49] The teacher then draws a church, chain, chips, and chops with their names next to the drawings (excerpt from Grade 1 Literacy Lesson in School B).

The teacher in the Grade 6 English lesson on prefixes and suffixes in School B chose the action 'using the chalkboard' to explain prefixes and suffixes by offloading the textbook:[50]

> She [the teacher] transitions to new curriculum content by writing on the chalkboard "adding letters to make new words." Below this heading she writes "prefix" and next to it "beginning." Under prefix she adds "suffix" and writes "ending" next to it.
>
> After writing on the chalkboard, she asks the class to open the textbook to page 125. The first example in the textbook is adding a prefix and suffix to the word 'joy'. She replicates the example in the textbook on the chalkboard. She writes "joy" on the chalkboard next to prefixes and adds "en + joy = enjoy." Similarly, she writes "joy" next to suffixes and adds "joy + ful = joyful" (excerpt from Grade 6 English Lesson in School B).

The Grade 2 isiZulu teacher, for example, used the 'using the chalkboard' action to simplify the curriculum. She wrote a list of colours in isiZulu from the DBE workbook on the chalkboard for learners to copy in their exercise books.

Similarly, the Grade 7 economic and management sciences teacher from School C used the 'using the chalkboard' action to simplify the curriculum. He simplified the topic of

[49] Unfortunately, I did not hear clearly the word that the learner volunteered, she spoke very quietly.

[50] In one lesson, the teacher introduces three new curriculum content.

"poverty and inequality in South Africa" to a list of vocabulary with short definitions on the chalkboard for learners to copy in their exercise books. He did not provide his learners any opportunity to critically examine how the vocabulary and related definitions were used to conceptualise the discourse on poverty and inequality and to share their own views about the subject. The curriculum requires that learners give descriptions of the vocabulary in their books, it also requires learners to discuss the causes of inequality and poverty in South Africa.

Reading from textbooks/DBE workbooks/assessment sheets: This action includes the teacher reading paragraphs and referring to pictures in the textbooks or DBE workbooks or assessment sheets to introduce new curriculum content and revise curriculum content. It also includes individual learners or the class reading aloud from one of these sources. Teachers also use 'reading from textbooks/DBE workbooks/assessment sheets' action during a formal examination to help learners with reading the questions. In this action learners are obligated to listen to the teacher attentively.

The Grade 2 isiZulu lesson in School A typifies how the 'reading from textbooks/DBE workbooks/assessment sheets' action is used. The teacher introduced learners to isiZulu words describing clothing, fashion accessories and colours by offloading the worksheet in the DBE workbook:

> She [teacher] moves to the isiZulu vocabulary in the table at the bottom of page 25. She stands in front of the class and points at the graphic in the table and reads aloud the name which is written in isiZulu next to the picture. The whole class repeats the word aloud:
>
> The teacher points at the skirt and reads aloud "isikheti."
>
> The whole class repeats after her "isikheti."
>
> The teacher points at the pair of shoes and reads aloud "izicathulo."
>
> The whole class repeats after her "izicathulo."
>
> The teacher points at the red crayon and read aloud "libomvu."
>
> The whole class repeats after her "libomvu."
>
> The teacher points at the yellow crayon and reads aloud "lipuzi."

> The whole class repeats after her “lipuzi” (excerpt from Grade 2 isiZulu Lesson in School A).

Similarly, in School B’s Grade 5 social sciences lesson on types of weather the teacher introduced the concepts to describe the weather by writing the terms on the chalkboard and reading aloud the definitions from the textbook. Like the isiZulu teacher, he pointed to pictures in the textbook showing the different types of weather as shown in the excerpt below:

> He transitions to the next weather type by writing “cloud cover” on the chalkboard. He reads aloud from the textbook that cloud cover “is the amount of clouds in the sky.” He draws learners’ attention to the various pictures in the textbook that show different amounts of cloud cover. The pictures in the textbook show ‘clear skies’, ‘partly cloudy’ and ‘clouded’ skies (excerpt from Grade 5 Social Science Lesson in School B).

Generally, not all learners listen attentively when the teacher reads aloud from the textbook. They all participate when the teacher instructs them to read aloud in chorus from the textbook. In the Grade 5 isiZulu lesson at School B, for example, when the teacher read the paragraph from the textbook to the whole class, not all the learners were listening to her. Some were talking to their neighbours or fidgeting with items on the desk or walking around the class or fighting with one another. As a result, she constantly paused to focus their attention, which took up time and did not allow her to introduce the concept in one go. She quickly switched to instructing the whole class to read the next paragraph in the textbook aloud and in chorus. By the time learners reached the end of the paragraph the whole class was focused on reading it.

Asking closed-ended questions: In this action teachers ask learners closed-ended questions to recall curriculum content, solicit the correct answer, accept correct answers without exploring incorrect responses, ignore incorrect answers and ask a battery of questions in quick succession to assist learners to complete a learning task. The action requires learners to provide short answers immediately and for learners to raise their hands to volunteer their answers. It does not offer any opportunities for learners to think about the questions or participate in any substantive discussion about the questions, answers and curriculum content or to give their opinions. Furthermore, it does not allow

for feedback from the teachers. This type of action is referred to as the 'recitation method' (Gall, 1970, 1984) or 'recitation script' (Alexander, 2005).

Teachers appear to use the 'asking closed-ended questions' action to assess whether a sufficient number of learners can recite or recall curriculum content that they introduced in previous actions.[51] Furthermore, in this action teachers do not engage with learners about their reasoning for either correct or incorrect answers as shown in the action above of the Grade 1 lesson in School B about words beginning with "ch". They simply move to the next learner in search of the correct answer.[52] The action from the Grade 3 mathematics lesson on improper fractions in School C exemplifies the teacher searching for the correct answer:

> After all four volunteers show the three 'biscuits' they received to the class, the teacher asks the whole class: "What is my division sum?"
>
> Too few of the learners volunteer to answer this question.
>
> The teacher then paraphrases the question to guide learners to the correct answer. She explains that the distribution of the 12 'biscuits' to the four volunteers results in an equal distribution. After this explanation the teacher chooses a learner randomly to give her the answer. The learner did not provide the syntax of the division sum.
>
> The teacher paraphrases the question again: "12 biscuits and 4 learners and each get three?" She points at another learner for a possible answer. This learner did not provide her with an answer. She repeated the question and pointed at another learner for the answer. On the fourth attempt a learner answered: "$\frac{12}{4} = 3.$"
>
> After obtaining the correct answer the teacher asked the whole class to read the next question from the textbook (except from Transcript of the Grade 3 Mathematics Lesson in School C).

[51] The study did not confirm whether teachers use "asking closed-ended questions" to assess whether there are sufficient numbers of learners in the class who can recall curriculum content introduced earlier.

[52] The study did not explore after how many incorrect answers teachers repeat the explanation of new curriculum content.

The action ‘asking closed-ended questions’ also prevents learners from asking questions about the curriculum content or spontaneously sharing their understanding of it, or engaging in dialogue about concepts in the curriculum. In School C, the Grade 7 economic and management sciences lesson that explored poverty and inequality in South Africa typifies teachers’ practice of not engaging in authentic dialogue about curriculum content. The teacher accepted all the answers that learners gave to his question “what does poverty and inequality mean?” He did not allow classroom discussion on the different answers; instead, he told the class that they were all “100%” and moved to the next action – reading from the textbook about the standard of living in South Africa.

The action ‘asking closed-ended questions’ is also used to guide learners to answer a learning task similar to the battery of questions the Grade 7 mathematics teachers in schools B and C applied in the action ‘doing a learning task together’ or what Khoza and Msimanga (2022) refer to as rejoinders. In the Grade 5 isiZulu lesson from School B the teacher used the ‘asking closed-ended questions’ action to help learners complete a learning task with which they were struggling. She used it as a form of guided instruction to complete the assigned learning task:

> She noticed that there are five learners sharing a textbook; she rearranges the learners to two learners sharing a textbook. When individual learners ask her a question, she provides the answer to the whole class. As she walks around the classroom, she notices that many of the learners are struggling to complete the table. She seems to ask them a series of closed-ended questions.[53] After asking these questions learners seem to complete the table quickly (except from Transcript of Grade 5 isiZulu Lesson from School B).

The action ‘asking closed-ended questions’ is the only one among the set of frequently-used actions where there is interaction between the teacher and learners about curriculum content. However, the nature of the action prevents substantive dialogue about curriculum content and militates any contestation of the curriculum content. As a

[53] I have a rudimentary understanding of isiZulu. I observed that after the teacher asked a battery of questions, learners were able to complete the table with ease.

result it promotes the notion that curriculum content is a list of uncontested facts and limits possibilities for interactions between learners and the teacher.

Assigning learning tasks: In this action teachers instruct all learners to complete the same learning task on their own quietly. Learners are generally prohibited from working together to complete the learning task. They are obligated to work quietly on their own even in Grade R lessons where learners are arranged in groups. Learners are allowed to ask procedural questions about completing the learning task but are not permitted to engage in any dialogue about the learning task. Teachers seem to use this action as a means to control classroom interactions by keeping learners busy, show evidence of curriculum delivery, mask their lack of subject content knowledge and assert their authority.

In the Grade R lessons, the learning tasks in the main involve producing craft artefacts. From Grades 1 to 9, the learning tasks involve answering questions from the textbooks or DBE workbooks or from the chalkboard and copying from the textbook and chalkboard. The assigned learning task that require learners to answer questions are cognitively simple – either recalling curriculum content or applying procedures, algorithms or theories to solve standard types of problems or what the literature refers to as ‘memory’ and ‘procedural/routine’ tasks (Doyle, 1983; Tekkumru-Kisa et al., 2020).

The Grade 1 teacher from School B, for example, assigned learners to copy the date, the topic “creative writing” and five sentences from the chalkboard. This cognitively simple learning task did not allow learners an opportunity to formulate sentences, which is the purpose of creative writing. A noteworthy observation was that at least six learners copied the sentences from the chalkboard without spaces between the words; they wrote the sentences as five strings of letters, suggesting that they may not yet be able to read.

In the example below, the School C Grade 3 life skills teacher asserted her authority through the action of instructing learners to copy from the chalkboard a paragraph about efficiency being the driver for innovation in communication technology. She did not discuss the concept of efficiency. It appeared that she could not explain it and asked learners to find out at home what it referred to. The paragraph that learners copied from the chalkboard appeared to serve as evidence in learners’ exercise books that the teacher

covered the concept of efficiency. But the teacher did not explore the concept with learners.

> After the action of asking closed-ended questions and accepting single word answers about communication technology the teacher asks the class to open their exercise books and to copy the paragraph from the chalkboard. While the learners are writing in their exercise books, the teacher reads out aloud the paragraph on the chalkboard. The paragraph includes the word 'efficient' to describe the driver for progress to new forms of communication technologies. She realises that her learners may not know the word and immediately tells them: "I am not going to tell you what is efficient. You must find out at home." After copying the paragraph from the chalkboard, the teacher asks the class to draw an image of an old communication technology in their exercise books. She wants them to juxtapose it with a drawing of a satellite to represent an image of modern-day communication technology. She finds a suitable image of a satellite on the internet using her mobile phone and asks a learner who is talented in drawing to sketch the diagram on the chalkboard for the rest of the class to copy in their exercise books (excerpt from Transcript of Grade 3 Life Skills Lesson from School C).

Teachers do not make explicit the purpose of assigning the learning task and the evaluative criteria for learners to assess the quality of their outputs (products). This is similar to Hoadley's F^0 (Hoadley, 2006, 2018). The omission of the evaluative criteria appears to be a means to assert their authority – they are the ultimate judges of learner performance and learners have no recourse and no basis for questioning the teacher's decision. In the action below from the Grade 5 social science lesson in School B the teacher asserted his authority by not making the evaluative criteria explicit:

> He [teacher] asks a learner to go outside and to report on rainfall.
>
> The learner returns and reports "windy."
>
> The teacher tells the class that 'he [the volunteer] doesn't understand my question'. He does not wait for the class to digest his statement and help to paraphrase the question. He asks another learner 'to go outside again' and to

report on the weather. He does not instruct the learner to report on the weather with respect to rainfall.

The second volunteer comes back and reports that 'it is warm'. All the learners in the class are confused by the teacher's rejection of the volunteers' weather reports; however, none of the learners ask the teacher to explain what he wants the volunteers to observe or experience. The teacher stubbornly resists addressing this, although he is aware of their uncertainty and repeats that they are 'not understanding my question'. He asks a third learner to go outside and to report on the weather; although this time he gives the learner a hint: 'tell them about rainfall'.

The third learner comes back and reports to the class that it is 'cloudy'.

As with the concept of 'temperature', it would appear the question is counter intuitive for the learners because it is not raining; they appear to struggle to report on a non-event.

While the teacher does not show any physical signs of being exasperated; he tells the class in a loud animated voice "you don't know rainfall."

Eventually one learner answers: "there is 0mm of rain." This answer helps to concretise the concept to the class because another learner immediately shouts: "no rain." The teacher accepts these two 'correct answers' as an indication that the whole class understands the concept of precipitation and moves on to the next weather type (except from Transcript of Grade 5 Social Science Lesson from School B).

By contrast the Grade 5 mathematics teacher attempted to but appeared to struggle to make explicit the evaluative criteria for the learning task that she assigned. The learning task required learners to use 2D (two dimensional) Euclidian geometric figures to create a composite picture. While 'monitoring completion of the learning task' she observed that most of the learners were making simple composite pictures using 2D geometric figures or copying the examples in the textbook. Her initial instruction to the learners was to be creative without offering the process or concrete examples demonstrating acceptable levels of creativity. She left the class for a few minutes and returned with the exercise book of a learner from another Grade 5 class which she used to demonstrate

acceptable levels of creativity. This learner had drawn three pictures: a sun, a dog and a pine tree using two dimensional geometric figures. The drawing of the sun comprised a circle for the core of the sun and triangles for the rays emanating from the sun. She showed the class that this was an example of her expected standard for completing the learning task but did not guide learners on how to achieve this level of performance.

Explaining written questions: Teachers choose this action after the action 'assigning learning task' from the textbook or DBE workbook that comprise a set of questions for learners to answer. They explain words in the question, what the question requires learners to do and how learners should interpret or decode the question. However, as discussed above, they fall short of making explicit the evaluative criteria. The 'explaining written questions' require learners to listen to the teacher, but learners are not allowed to share how they interpreted the question. They are allowed to ask procedural questions only.

The School B Grade 6 English teacher for example, read each question twice and explained each question to her class. The Grade 7 natural sciences teacher from School B decoded the questions for learners. She explained to the class that when a question contains the verb "name" it required them to provide a "list" and when the question had the verb "describe" they were expected to offer an "explanation".

The 'explaining written questions' is the only action where teachers in the study used code switching. Teachers switched from English (the language of learning and teaching (LoLT)) to an African language to explain the question. The Grade 5 life skills teacher from School B, for example, switched from English to isiZulu to explain the requirements of one question that she considered to be more complicated than the others in the assigned learning task.

***Monitoring completion of learning tasks*:** In this action teachers constantly walked around the classroom to check learners' progress in completing the learning task, answer learners' questions about procedures to complete the learning task, provide feedback to learners on their progress, and assess whether learners can complete the learning task. Teachers explained the curriculum content again when they noticed that too many learners were struggling to complete the assigned learning task. Learners are required to complete the learning task quietly on their own.

Learners across the 54 lessons appeared to prefer to work together. They seldom complied with the teachers' prescription to work on their own quietly. They talked to one another about the learning task, corrected one another's answers, helped one another make sense of the learning task, shared their meagre stationery and informed on their colleagues who were not working on the assigned learning task. Learners, particularly those in foundation phase, were very indignant about fellow learners not complying with the teachers' instructions and were quick to tell on their neighbours they believed were doing wrong. None of the teachers in the study leveraged these natural learner-learner interactions for completing the learning task together to facilitate learning. These interactions by learners were seen as behaviours that cannot be controlled, and distracted learners from completing the learning task.

The observation data also show that learners were easily distracted and interacted with each other for purposes unrelated to completing the learning task. They bullied one another, fought with one another, stole stationery from each other, among other disruptions. While doing the action 'monitoring completion of learning tasks' teachers often had to step in to stop fights between learners, as shown in the excerpt from the Grade 3 mathematics lesson in School C:

> She [the teacher] walks around the class to monitor learners' work and to keep their focus on the completing the task. In the process she breaks up a fight between two boys; brings the class back to focus on completing the questions in their exercise book by repeating the instructions, and instructs them to 'stop talking'.
>
> One learner asks her permission to go for a toilet break. She ignores the learner.
>
> She notices that learners are struggling with the second question: $\frac{8}{3} =$ $2\ and\ remainder\ 2$. She explains the distribution again (except from Transcript of Grade 3 Mathematics Lesson from School C).

The classrooms were overcrowded and disruptions by a few learners quickly affected the whole class. The average number of learners per class was 47 except for Grade R classes that had an average of 28 learners. In School B, some of the classes in foundation phase had over 50 learners. This high figure in the foundation phase was a

result of teacher absenteeism. When a foundation phase teacher was absent their learners were distributed to other classes. Throughout the three weeks of fieldwork, there was not a single day where all three sample schools had a full complement of teachers. This appeared to be a normalisation of teacher absenteeism (Sabarwal et al., 2022).

In summary, the seven actions teachers frequently chose to introduce new curriculum content were all forms of whole-class teaching – teachers address the whole class. However, the form of whole-class teaching that teachers chose controlled learners' engagement with the curriculum. Learners were obligated to listen attentively to the teachers' explanation of curriculum content, provide short answers promptly based on these explanations and complete a learning task quietly on their own.

5.3.2 Controlling Classroom Interactions

The observation data show that teachers generally cannot hold the attention of all learners in the classroom while implementing the seven actions to deliver the curriculum. Teachers constantly paused during whole-class teaching to stop learners who were engaging in disruptive behaviour or to focus the attention of those learners who have stopped listening to them and were doing something unrelated to the teachers' instructions or those who were being distracted by their neighbours. Teachers frequently choose the actions 'focusing learners' attention', 'preparing learners for the lesson', 'regulating learners' behaviour' and 'affirming learners' good behaviour' to control learners' classroom behaviour and classroom interactions.

The Grade 5 isiZulu teacher from School B and the Grade 1 teacher from the same school for example intervened seven times in five minutes and 20 times in 37 minutes respectively. These pauses consumed valuable teaching time, distracted teachers from the planned actions and exhausted and frustrated them.

The excerpt below from the Grade 5 isiZulu lesson in School B, for example, shows how the teacher paused every two minutes and took the actions 'focusing learners' attention' and 'regulating learners' behaviour' to obtain learners' compliance with the action 'correcting products of learning tasks':

> The teacher is constantly interrupted by learners in the 15 minutes it takes to complete the corrections of previously assigned learning tasks. A learner requests a toilet break even though it is the first period in the morning, a few learners walk around the classroom, and three learners are fighting. She separates the three learners who are fighting and changes their seating locations. She prohibits the learner from leaving the class for a toilet break. She instructs the class to focus, to stop talking and to take out their textbooks, among other admonishments. In this short time, she regulates learners' behaviour seven times; roughly every two minutes. (excerpt from Transcript of Grade 5 isiZulu Lesson in School B).

A noteworthy observation is the absence of any forms of sanctions for learners who do not comply with the teachers' preferred classroom interactions or etiquette. Only in one lesson did the teacher refer to sanctions. In the Grade 3 lesson on life skills at School C the teacher regulated a learner's behaviour when he shouted out an answer by saying that she was ignoring him because of his bad behaviour earlier in the day. While this may be a sanction, it is classified as 'regulating learners' behaviour' because the teacher had chosen the sanction for the learner's behaviour in a previous lesson and in this lesson was regulating the learners' behaviour accordingly.

The description and analysis of the four actions aimed at controlling classroom interactions are presented below in the order of frequency that teachers use them.

Focusing learners' attention: The action includes stopping learners from chatting to their neighbours, walking around the classroom, fidgeting, sharing stationery, teaching each other and distracting the teacher. It also includes the teachers instructing learners to maintain the arrangement of desks in their preferred arrangements. Learners are required to comply with the teachers' instructions, namely be seated at their desks, listen quietly to the teacher, answer closed-ended questions, keep the classroom neat and tidy and complete learning task quietly on their own. They are prohibited from talking, sharing stationery, teaching one another, distracting the teacher and rearranging furniture.

Teachers in the foundation phase use various techniques to focus learners' attention. The Grade 2 isiZulu teacher in School A, in the excerpt below for example, clapped her

hands and counted “ONE” aloud, then clapped again and counted “TWO” aloud, on her third clap learners were required to stop doing everything and to focus their attention on her before she counted “THREE” aloud. She also used the “ONE, TWO, THREE” counting technique:

> To get all the learners to focus their attention on copying the words from the chalkboard, the teacher uses the classroom management technique; “ONE, TWO, THREE.” This is a physical activity that requires learners to stop whatever they are doing and respond to her call. She shouts “ONE”, in response the learners lift their hands up above their shoulders. She shouts “TWO”, learners bring their hands forward stretched in front of their chests. She shouts “THREE” which requires learners to bring down their hands and to place their index finger of one hand on their lips (excerpt from Transcript of Grade 2 isiZulu Lesson from School A).

In the main, teachers shout at learners to keep quiet and to stop what they are doing to focus their attention on the teachers’ instructions. The excerpt below from a Grade 5 life skills lesson on the significance of water for life on earth in School B shows how the teacher interrupted her reading from the textbook and took the action ‘focusing learners’ attention’:

> The teacher stands in the front of the classroom reading aloud from the textbook the passage about the use of water. The paragraph is titled “what is the use of water?” Not all the learners are listening to her. A few learners are walking around, some are chatting away, and one learner sitting in the front row is combing her hair without any concern for the teacher. The teacher stops reading from the textbooks and shouts at learners to be “quiet” and to “focus” (except from Transcript of Grade 5 Life Skills Lesson in School B).

Preparing Learners for the Lesson: The action ‘preparing learners for the lesson’ includes teachers directing learners from the playground into the classroom, permitting learners to enter the classroom, greeting learners, doing a call and response, instructing learners to tidy the classroom and straighten their desks, instructing learners to do physical exercise to energise them, writing the date and topic on the chalkboard and instructing learners to open the textbook or DBE workbook to a given page. The action

‘preparing learners for a lesson’ does not include a formal introduction that outlines the purpose of the lesson and the learning outcomes that learners should attain. Learners are required to sit down, wait quietly for the teachers’ instructions and follow the teachers’ instructions such as to quietly open their copies of the textbook or DBE workbook.

Teachers in intermediate and senior phase lessons choose the action ‘preparing learners for the lesson’ more frequently than those teaching foundation phase. In intermediate and senior phases there are different teachers responsible for teaching the various subjects in the CAPS. The transition between subjects (or periods allocated to subjects) takes up lesson time as learners pack their bags and walk to the teacher’s classroom or wait for the teacher to come to them. In an extreme case it took half of the period for the Grade 5 natural science and technology teacher in School C to ‘prepare learners for the lesson’ as described in the excerpt below:

> The lesson is immediately after the second lunch break. Only nine learners enter the classroom immediately after the school siren rings to signal the end of the lunch break. One of the nine learners straightaway requests permission to leave the classroom to drink water. The teacher declines his request. During the next 10 minutes another five learners enter in dribs and drabs while making lots of noise. At this point the teacher decides to go outside and to direct the learners to the classroom. Of the 14 learners in the classroom, a handful opened their textbooks and exercise books. It takes the teacher more than 15 minutes to direct all the learners from the playground to the classroom and for them to settle down at their desks. (except from Transcript of Grade 5 Natural Science and Technology Lesson from School C).

Once all the learners were in the classroom, the teacher immediately chose the action ‘assigning learning task’. The learning task required learners to copy the food pyramid from the textbook into their exercise books quietly. This action was followed by ‘monitoring completion of the learning task’. He walked around the classroom and occasionally took the action of ‘giving feedback’ to learners on the diagram of the food pyramid in their exercise books. In this lesson there was very little interaction between learners and learners and the teacher about the food pyramid or the evaluative criteria for the learning task. The teacher seemed to assume that learners would make a close

copy of the diagram in their exercise books and his feedback was about the size and neatness of the copy. It appeared that the Grade 5 natural science and technology teacher in School C used the remaining 15 minutes of the lesson time to keep learners occupied in the classroom and have evidence of curriculum delivery in their exercise books.

In the foundation phase teachers generally try to maintain the flow of actions and reduce transition time between subjects. They signal transition between subjects by asking learners to close or open their exercise books. These are either collected or handed out by designated learners. Simultaneously, teachers start instructing learners about the next subject.

The excerpt below from the Grade 3 mathematics lesson in School C on improper fractions shows how the teacher signals the change in subjects and chose the action 'preparing learners for the lesson' to maintain the flow of actions and reduce transition time between subjects:

> There is no formal introduction to improper fractions; the transition is done by asking learners to close their exercise books and to place their hands on their desks. She asks one leaner to handout the mathematics textbooks. While the learner distributes the textbooks, she instructs the class to open to page 17. Concurrently, she gets the class to settle down in their chairs, focus their attention from the previous learning task of copying work from the chalkboard to the exercise book, and to keep quiet. She repeats her instructions to "stop talking", to "be still", and to "open the textbook to page 17 – grouping and sharing" (excerpt from Transcript of Grade 3 Mathematics Lesson in School C).

Similarly, the Grade 5 mathematics teacher from School B instructed learners to open their textbooks and exercise books while she wrote down the date and topic on the chalkboard. Learners began copying the date and topic (2D shapes) in their exercise books without any instruction from the teachers.

> She [teacher] starts the lesson by asking the learners to take out their mathematics textbooks and exercise books. While the learners are getting organised for the mathematics lesson, she writes "2D Shapes" on the

chalkboard. Most of the learners start copying this heading into their exercise books before she gives any instructions to do this (excerpt from Transcript of Grade 5 Mathematics Lesson in School B).

***Regulating learners' behaviour*:** In this action teachers break up fights between learners, stop learners from bullying each other, reprimand learners from chewing gum and eating in the class, stop learners talking while the teacher is speaking, encourage learners to raise their hands to ask or answer questions, comfort learners who are crying by saying "sorry", disparage learners who are rude, insult learners and their parents for learners' insolence, correct learners' grammar and instruct learners to only use English in the lesson. Teachers use this action to instil their preferred classroom etiquette – learners are required to be seated quietly at their desks and comply with the teachers' instructions dutifully. The action 'regulating learners' behaviour' reminds learners about the teachers' preferred classroom etiquette when they are noncompliant and often takes the form of shouting at learners, insulting learners and physically breaking up fights. The Grade 7 mathematics teacher from School A for example shouted the word "manners" to remind learners that they were disobeying her preferred classroom etiquette.

Learners' behaviour in the classroom is unpredictable even in the most tightly controlled lessons where the teacher minimised interactions between learners, learners and the teacher and learners and LTSM. The teacher in the Grade 5 social science lesson in School B, for example, exercised tight control over interactions between learners, learners and the teacher and learners and the textbook; nonetheless, one learner disrupted the lesson by passing wind loudly. Learners in the immediate vicinity started laughing out loud. In response, the teacher chose the action 'assigning learning task' for all learners to complete on their own quietly rather than 'regulating learners' behaviour'. This allowed the teacher to regain control before the disturbance escalated to the whole class.

Affirming learners' good behaviour: Teachers use this action to praise learners who answer a question correctly, complete the assigned task to their satisfaction and abide by the teacher's preferred classroom etiquette. In this action teachers also encourage the rest of the class to celebrate together a learner's achievements and compliance with the

teacher's preferred classroom etiquette. In the Grade 3 mathematics lesson in School C, for example, the teacher congratulated a learner who initially struggled to provide the correct mathematical syntax for an improper fraction and later in the lesson provided the correct answer for another question related to the syntax of improper fractions. The teacher invited the whole class to applaud him. Similarly, the Grade 7 natural science teacher from School B carried out a little ritual when a learner provided the correct answer. She had "✓" and "×" written on the corner of the chalkboard and when a learner provided the correct answer, she pointed at "×" and say that "we prefer ✓ to ×". Learners appeared to react positively to this form of affirmation.

5.3.3 Assessing Teaching Outcomes

Teachers use three actions to assess teaching outcomes: 'correcting learning task products', 'accepting uneven quantities of work' and 'marking learners' exercise books'. Descriptions and analyses of the three actions are presented below in order of frequency of use.

Correcting learning task products: In this action teachers read the questions from the assigned learning task, explain the questions, ask learners for the correct answers and confirm the correct answers. These actions are like those used to introduce new curriculum content. Teachers use the action of 'correcting learning task products' as an opportunity to revise curriculum content. Learners are required to listen to the teacher explain the question, provide the correct answers, mark their products and correct answers that were incorrect. Teachers do not discuss the quality of learners' products. They also do not provide opportunities for learners to discuss how they arrived at their answers or what is considered a good answer or how they understood the curriculum. Put differently, teachers do not assess learning; instead, they steer the question-and-answer exchanges toward the correct answers and check that learners have recorded the correct answers. The excerpt below from the Grade 7 natural science lesson in School B is a typical example of this action and how the teacher used it to revise the concept of heat transfer instead of assessing learning:

> After lecturing the learners on 'heat transfer' she reads out the first question in the learning task and asks learners to volunteer their answers. The learners are reticent. Only a few have their hands up to volunteer an answer. She notices this

and asks them: “why so few are volunteering?” Learners respond positively and more volunteer to answer the next question. She writes the correct answer below the date on the chalkboard and learners are required to correct their work (excerpt from Transcript of Grade 5 Life Skills Lesson in School B).

In the foundation phase teachers seldom choose this action because they generally do the learning task with learners, such as learners in the Grade 1 lesson in School B copying the words starting with “ch” and related pictures from the chalkboard. Similarly, learners in the Grade 3 mathematics lesson in School C completed the questions on improper fractions after the calculations had been done with the teachers in ‘doing a learning task together’.

Accepting uneven quantities of work: In this action the teacher appears to check that a reasonable number of learners completed the learning task while implementing the action of ‘monitoring completion of the learning task’.

In lessons where the teacher allocates an amount of time for learners to complete the learning task, teachers accept different quantities of work from learners. The study did not review learners’ exercise books; the data on teachers accepting uneven quantities of work was obtained by the researcher walking around the classroom and observing the amount of work learners completed in their exercise books. This anecdotal evidence showed that some learners had written down the date and topic only in their exercise books. Others had completed part of the assigned learning task while others had completed it in the allocated time. In the Grade 2 isiZulu lesson on vocabulary for clothing, fashion accessories and colours in School A referred to earlier, the teacher started collecting learners’ exercise books although only half of the 50 learners had completed copying the isiZulu words from the chalkboard.

The action ‘accepting uneven quantities of work’ appears to implicitly stream learners into categories of “fast” and “slow” learners. Only the Grade 3 mathematics teacher at School C explicitly streamed learners. She divided the class into A, B and C columns. Learners sitting in Column C were required to answer only two of the questions on improper fractions because they were grouped as “slow” learners while the rest of class had to complete three questions in their exercise books.

Generally, learners in foundation phase lessons who complete the assigned learning task quickly continue learning by doing independent reading in the reading corner or completing SUDOKU or completing worksheets in the DBE workbook. In a few foundation phase lessons, learners are required to close their exercise books and sit quietly to signal to the teacher that they have completed the learning task.

In the lessons for intermediate and senior phases, learners who work quickly have no opportunities to continue learning – they close their exercise books and often start chatting with their neighbours. In none of the lessons observed did teachers assign extended learning opportunities for them to complete.

The anecdotal observation data suggest that teachers are satisfied when a proportion of learners have completed enough of the learning tasks in their exercise books before they move to the next action. The data also seems to suggest that teachers believe that having learners write the date and topic in their exercise books serves as evidence that the teacher did deliver the curriculum in the required sequence and at the required pace.

The frequency analysis of actions reveals that more teachers in foundation phase choose the action 'accepting uneven quantities of work'. Before teachers in the foundation phase transition to the next subject they collect all learners' exercise books despite the fact that some learners have not completed the learning tasks. In the intermediate and senior phases it appears that learners are expected to complete the learning task at home in instances when the lesson had ended before learners completed the learning task. In lessons where the teacher allocates time during the period for completing the learning task, they move to the next action like their counterparts in foundation phase, even though some learners had not completed the learning task. Furthermore, the observation data from intermediate and senior phases lessons show that when the teachers implement the action 'correcting products of learning tasks', they do not allocate any lesson time for those learners who have not completed the assigned learning task to complete it. Teachers appear to accept that there are learners who will complete the assigned learning task, learners who will partially complete the learning task and learners who will do little of the learning task.

Marking learners' exercise books: This action is implemented with the 'monitoring completion of the learning task' action. The Grade 6 English teacher from School B, for

example, marked learners exercise books while walking around the classroom and monitoring learners completing the learning tasks on prefixes and suffixes. A few teachers sat at their desks and asked learners to bring their exercise books for marking while the rest of the class completed the assigned learning task on their own.

The 'marking learners' exercise books' action takes the form of checking that learners completed the assigned task and that many of the answers are correct. The feedback to learners whose exercise books the teacher is marking is about non-completion of the assigned learning tasks. There is no substantive feedback on the quality of learners' products. Teachers in foundation phase put stickers such as stars in learners' exercise books when they consider the work to be excellent; however, they do not tell learners their reasons for receiving these awards. Again, the teachers do not make the evaluative criteria explicit to learners.

In School C, all teachers have a red-inked rubber stamp engraved "INCOMPLETE" which they stamp in learners' exercise books when the learning tasks are incomplete.

5.3.4 Solving Practical Problems in the Classroom

The actions teachers choose to solve practical problems that arise in a lesson are grouped as the action 'solving practical problems'. In this action teachers help learners with stationery, sharpening pencils, putting band-aid on learners' cuts and bruises and ensuring equitable sharing of textbooks. They use this action to solve practical problems to prevent learners from being distracted. The excerpt below from the Grade 3 life skills lesson in School C shows how teachers assist individual learners with practical needs:

> It takes the teacher a while to get the class to settle down and to focus their attention on the lesson; first she 'solve the problems' of a group of learners who have encircled her when she turns around. One learner wants her permission for a toilet break, which she permits. The second learner shows her the cut on his finger from the pencil sharpener. She brings out and applies a band-aid on his cut and scolds him: "Whose fault is it?". The third learner wants to know what he should be doing, which the teacher explains (except from Transcript of Grade 3 Life Skills Lesson in School C).

The next section presents an analysis of the sequence in which teachers choose actions from the set of 15 frequently-chosen actions.

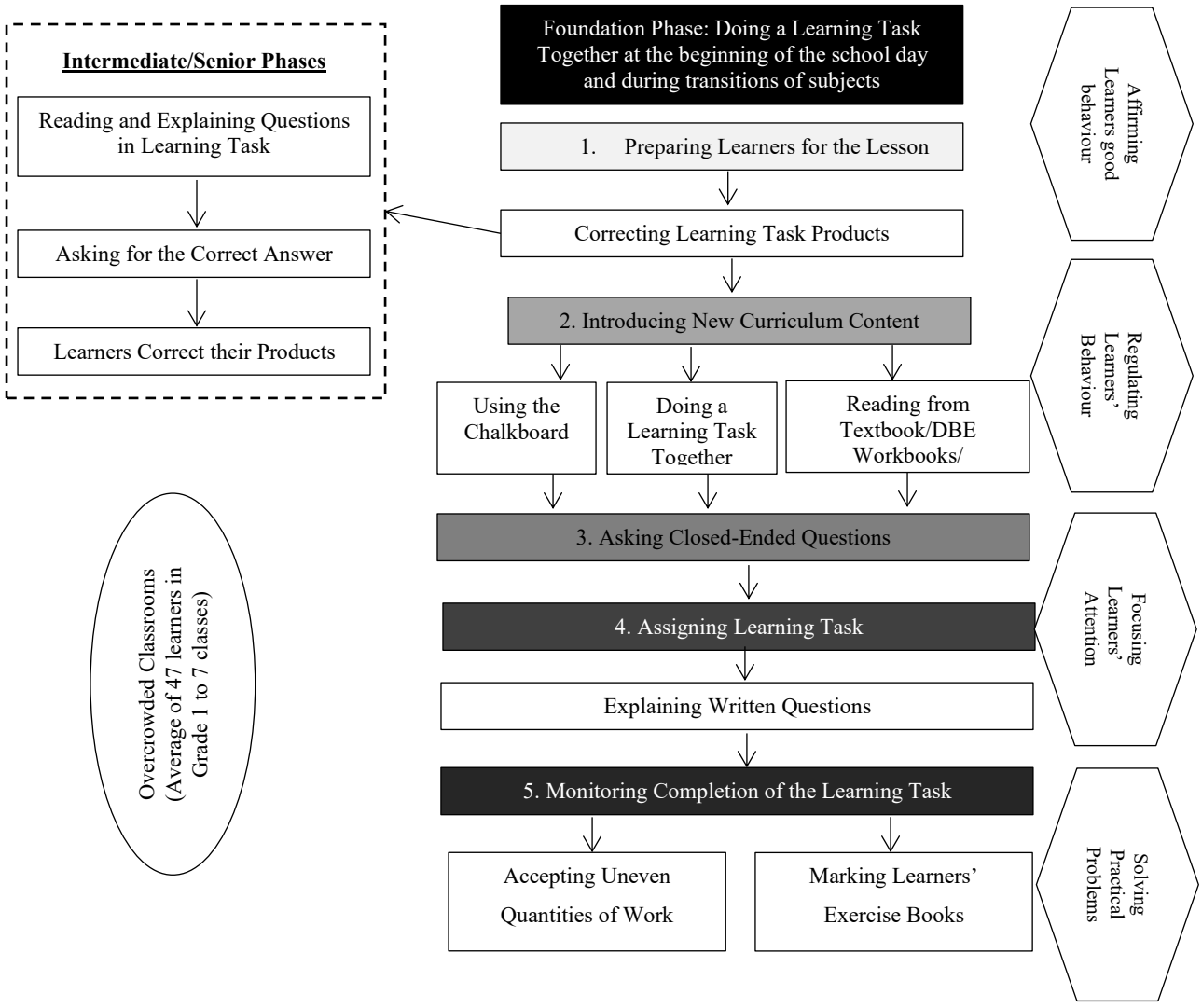
5.4 The Form of the Typical Teaching Modality – Five-Part Lesson Routine

Teachers select 11 actions from the set of frequently-chosen actions in the following sequence: 1) 'preparing learners for the lesson', 2) 'doing a learning task together', 3) 'correcting products of learning', 4) 'reading from the textbook/DBE workbooks/assessment sheets', 5) 'using the chalkboard', 6) 'asking closed-ended questions', 7) 'assigning learning task', 8) 'explaining written questions', 9) 'monitoring completion of the learning task', 10) 'accepting uneven quantities of work' and 11) 'marking learners' exercise books'. While doing these actions teachers also choose actions in response to learners' actions and problems that arise in the classroom, namely 'focusing learners' attention', 'regulating learners' behaviour', 'solving practical problems' and 'affirming learners' good behaviour'.

The sequence in which teachers choose actions creates a lesson routine that divides the period into five parts, as shown in Figure 5 below. Each part in the diagram is numbered. In the first part the teacher chooses the action 'preparing learners for the lesson' which obligates learners to be seated quietly behind desks or on mats in front of the class in a few foundation phase lessons. In the second part the teacher chooses actions that are forms of whole-class teaching to introduce new curriculum content that require learners to listen quietly to them. In the third part the teacher chooses the action 'asking closed-ended question' about curriculum content. Learners are required to recall curriculum content promptly, they are not encouraged to ask the teacher related questions and the teacher does not provide feedback. In the fourth part the teacher assigns the same learning task to all learners and explains the task without making explicit the evaluative criteria for what they consider acceptable products. Learners are allowed to ask procedural questions to complete the learning task and are obligated to complete the learning task quietly on their own. In the last part of the lesson the teacher monitors the completion of learning tasks and assesses whether learners are able to complete them. They also accept that not all learners are able to complete the learning tasks. I refer to this routine as the five-part lesson routine.

The right-hand side of Figure 5 shows the actions teachers choose in response to learners' actions and problems that may arise in a lesson. While the study did not collect time series data to accurately measure the amount of lesson time teachers allocate to different actions, the anecdotal observation data show that teachers allocate most of the period to the action 'monitoring completion of the learning task'.

Figure 5: Lesson routine in the context of overcrowded classrooms.[54]



There are visual differences between foundation phase and intermediate and senior phases in the five-part lesson routine. Teachers in foundation phase including Grade R in Schools A and B seat learners on a mat at the front of the classroom to deliver new curriculum content. In School C, this seating arrangement is used by Grade R teachers.

[54] Author's Analysis.

The shift in classroom organisation gives teachers more control over learners; learners sit close together, which gives the teacher a good view of all of them. In the intermediate and senior phases, learners remain seated at their desks when teachers introduce new curriculum content. This difference in seating arrangements during the introduction of new curriculum content does not change teachers' choice of actions to deliver the curriculum. Teachers in foundation phase offload the textbook or DBE workbooks or posters and ask closed-ended questions like their counterparts in intermediate and senior phases.

The next section describes and analyses the classroom interactions that the five-part lesson routine generates.

5.5 Classroom Interactions

The five-part lesson routine assigns a small set of actions for learners in a lesson. These are to sit at their desks (or mats) quietly, listen to the teacher deliver curriculum quietly, answer questions promptly, ask procedural questions about completing the assigned learning task, complete the assigned learning task on their own quietly, follow the teachers' instructions dutifully and comply with the teacher's preferred classroom etiquette and protocols. These actions require learners to be quiet and compliant with teachers preferred classroom etiquette and protocols. Put simply, learners are assigned a passive role in a lesson. In a similar vein, the five-part lesson routine assigns few roles for teachers in a lesson. Teachers are required to deliver the curriculum and show evidence thereof, assess teaching outcomes, control classroom interactions and solve practical problems that arise in a lesson. Consequently, there is very little interaction between learners, learners and the teacher and learners and LTSM about curriculum content and learning in the five-part lesson routine.

Furthermore, the five-part action-sequence routine does not permit any form of spontaneity on the part of either teachers or learners. It is a typificatory lesson routine that socialises or regulates both teachers and learners into specific behaviours. As such, it is an institution – "there is a reciprocal typification of habitualized actions by types of actors" (Berger & Luckmann, 1966, p. 71). It is intrinsically teacher-centred where the teachers' goals are prioritised over learning outcomes and learners are required to be passive.

However, learners choose actions other than those assigned to them by the five-part lesson routine. They take their time to "prepare for a lesson": chat, laugh and socialise with one another, fidget, bully, harass and fight with each other, steal their neighbours' stationery and do not dutifully comply with teachers' instructions. They struggle to remain seated in their chairs behind their desks and often walk around the classroom. In the foundation phase classrooms learners crawl under their desks or spend time sharpening their pencils in the waste bin/basket at the front of the classroom. There is also a continuous stream of requests from learners for permission to leave the classroom for toilet breaks.

There are also various ways in which learners cooperate with and assist teachers. They are keen to participate in the lessons actively. They respond to the action 'asking closed-ended questions' enthusiastically, volunteer earnestly to participate in teacher-led demonstrations, use LTSMs eagerly, and assist gladly with handing out books, collecting books and going on errands for the teacher. They also share their stationery, help each other with the assigned learning task and tell on their colleagues who are not complying with the classroom etiquette and protocols. However, teachers ignore these various ways in which learners do support their goals. This may be because learners' actions in the classroom are unpredictable and require teachers to be alert at all times during the lesson. This is exacerbated in overcrowded classes.

The limited set of actions the five-part lesson routine assigns to learners enables teachers to increase stability in the lesson and easily monitor classroom interactions in overcrowded classrooms – they have only to look out for any deviations. Similarly, assigning the same learning task to all learners to complete on their own makes it easier to monitor completion of learning tasks and classroom interactions.

Learners' actions and teachers' responses during lessons create a low-intensity buzzing ambient sound in the classrooms, with brief moments of silence. The moments of silence are in response to teachers' actions for 'focusing learners' attention' and 'regulating learners' behaviour'. Although, these actions exhaust and frustrate teachers and interrupt their planned actions, teachers seem to adhere to the five-part lesson routine.

The next section describes and analyses the observed outputs the classroom interactions produce.

5.6 Observed Outputs

The five-part lesson routine as discussed above generates various forms of interactions between learners, of which some are unfavourable to learning and teaching. It generates very little interaction between learners and the teacher. The interactions between learners and the teacher are limited on learners' part to answering closed-ended questions and asking procedural questions and on teachers' part taking the actions focusing and regulating learners' behaviour to comply with their instructions and preferred classroom etiquette and protocols. These limited interactions produce five observable outputs.

The foremost observable output is the hierarchical pedagogic relation. In this hierarchical relationship learners are obligated to be passive and quiet and the teacher is responsible for all aspects of the lesson, namely delivering the curriculum content, assessing teaching outcomes, controlling classroom order and stability, and solving practical problems that may arise.

The second observable output is evidence in learners' exercise books and artefacts that teachers are complying with the prescriptions of the CAPS, namely delivering the curriculum in the sequence and at the pace prescribed by the CAPS, and assigning learners the number of learning tasks prescribed by the CAPS. The entries in learners' exercise books that serve as evidence of curriculum delivery include the date and topic, answers to questions from the textbooks and information and notes which learners copy from the chalkboard and textbook. Learners' completion of worksheets from DBE workbooks also serve as evidence of complying with the CAPS. In the case of Grade R, the artefacts that learners create are evidence of compliance with the CAPS.

The third observable output is streaming of learners into "fast" and "slow" learners. Teachers assign the same learning task to the whole class and appear to accept that not all learners will complete it at the pace prescribed by the CAPS. In doing so, it allows teachers to show evidence of complying with the prescriptions of curriculum delivery. It also lays the blame for not being able to complete learning tasks on learners. Teachers

provide evidence that they have monitored learners' work in various ways, including the use of the INCOMPLETE rubber stamp in red ink used in School C.

The fourth observable output is teachers' presentation of curriculum content as uncontested facts. Teachers generally offload the textbook or DBE workbooks. They simplify the text and explain the text. They do not permit dialogue on the epistemology of the content. There is no opportunity for learners to critically examine the curriculum content and share their understanding.

The fifth output is some form of order and stability in the class. The hierarchical pedagogic relation assigns learners few actions, allowing the teacher to control classroom interactions. The limited actions assigned to learners reduce the chances of learners taking extreme forms of actions, disrupting the lesson and inflicting serious harm on one another. It also makes monitoring classroom interactions more manageable in that teachers have to look out only for deviations from a small set of actions.

5.7 Conclusion

The five-part lesson routine is the form of the typical teaching modality in the three sample schools. It assigns limited actions for both teachers and learners that regularise classroom interactions. The few actions it assigns to learners construct them as passive and those that it assigns to teachers reduce their role to compliance and control. In other words, the five-part lesson routine is an institution shared by teachers in the study to regularise classroom interactions. It also shows that this institution is centred on meeting teachers' goals rather than on learners learning the curriculum.

The next chapter presents and analyses the data from interviews conducted with teachers. It identifies variables that teachers believe structure the lesson to produce the five-part lesson routine.

CHAPTER 6: THE VARIABLES THAT TEACHERS BELIEVE INFLUENCE TEACHING

The previous chapter presented and analysed the data gathered through classroom observation. It applied the concept of teachers' choice actions from the institutional analysis and development (IAD) framework to analyse the data. The analysis shows that the form of the typical teaching modality in the sample schools is an action-sequence lesson routine – the five-part lesson routine. The analysis of the observation data also confirms the assumption underpinning the study that the teacher-centred modality is an institution in public primary schools. The five-part lesson routine regularises classroom interactions by assigning actions to teachers and learners that typifies their respective roles. According to Ostrom (2005), institutions are created by shared rules, norms and shared strategies. This chapter applies the IAD framework to analyse the data obtained from 47 interviews with teachers across the three sample schools to identify the variables that teachers believe influence their teaching. In doing so, it offers insights on how teachers perceive the structure of a lesson is created that produces the five-part lesson routine. As discussed in chapter three, this study adapted the concept of rules-in-use to institutions-in-use that include rules and norms that teachers adopt to regulate their behaviour in a lesson and classroom interactions.

The chapter is organised into six sections. It begins with describing the positions of the 47 teachers interviewed by sample schools. This is followed in section two by an analysis of the 126 institutional statements extracted from the transcripts of interviews with teachers. Section three presents and analyses the 12 shared institutions-in-use. Section four presents the biophysical and material conditions that teachers believe influence their teaching which in turn affect the shared institutions-in-use. Section five presents the attributes of the community that teachers believe have a significant impact

on teaching. The last section offers concluding remarks about the contextual variables that structure the lesson and produce the five-part lesson routine.

6.1 Positions of Teachers Interviewed

Table 5 below summarises the positions of the 47 teachers interviewed at the time of the fieldwork in their respective schools. This sample of teachers interviewed was not strictly representative of the positions, grades, education phases and subjects in the three sample schools at the time of the fieldwork because teachers' participation in the study was voluntary. The large number of teachers interviewed provide a good cross-section of teachers in the three sample schools to identify the variables they believe structure a lesson.

Additionally, the number of teachers interviewed does not correspond with those whose lessons were observed. A small number of teachers whose lessons were observed did not want to participate in the interviews and a few teachers who participated in group interviews preferred not to be observed.

Table 5: Profile of teachers interviewed by school and position at schools in August 2019.[55]

Position/School	School A (Located in Historically Coloured Township)[56]	School B (Located in Historically African Township)	School C (Located in Historically Indian Township)	Total
Principal	1	1	1	3
Deputy Principals	0	0	2	2
Heads of Departments	2	0	2	4
Grade R Teachers	0	1	1	2
Foundation Phase Teachers (Grade 1 to 3)	8	3	4	15

[55] Consent forms, field notes and transcripts.

[56] In this study the categories do not refer to race as an intrinsic human trait but rather as a bureaucratic tool that was originally employed by the apartheid state to entrench racist rules-in-form and policies and continue to be used in post-apartheid South Africa to monitor redress and ensure the socioeconomic rights of all South Africans (Posel, 2001).

Position/School	School A (Located in Historically Coloured Township)[56]	School B (Located in Historically African Township)	School C (Located in Historically Indian Township)	Total
Intermediate Phase Teachers (Grade 4 to 6)	2	7	4	13
Senior Phase Teachers (Grade 7)	3	2	3	8
Total	**16**	**14**	**17**	**47**

One in five (19%) teachers interviewed were part of the school management team. This is a higher proportion than would typically be found in a school staff complement. Over one-third (36%) of the teachers interviewed were teaching foundation phase, more than a quarter (28%) were teaching intermediate phase and fewer than one in five (17%) teachers were teaching Grade 7 learners. The senior phase teachers (Grade 7) were over-represented relative to a typical school. Relatively more foundation phase teachers were interviewed in School A because, in addition to individual interviews, two small group interviews with foundation phase teachers were conducted at the school.

The teachers interviewed in intermediate and senior phases were teaching languages (including literacy), mathematics (including numeracy), life skills, natural science and technology, economic and management sciences and social sciences.

The next section describes and analyses the 126 institutional statements extracted from the transcripts of the 47 interviews with teachers.

6.2 Institutional Statements

Institutional statements are linguistic statements that represent the opportunities and constraints teachers believe they face in a lesson. The actions and outcomes teachers are obligated, prohibited and permitted to take and attain in a lesson influence their conduct in the classroom. The institutional statements extracted from the transcripts are enumerated in Table 8 in Appendix E. Table 8 lists the institutional statements by frequency of mention by teachers, school of teacher, type of institution-in-use

(boundary, position, choice, information, aggregate, payoff and scope), deontic (must do, must not do and may do) and dimensions of teachers' work.

As discussed in the analysis section of chapter four (section 4.5), teachers do not differentiate between teaching curriculum content, being a teacher and their role as a teacher working in a school with a range of added responsibilities such as engaging with learners' parents and colleagues, participating in extracurricular activities and doing administration among the others roles defined as dimensions of teachers' work. They see all their responsibilities as part of teaching, referred to as dimensions of teachers' work.[57]

The initial analysis of the 126 institutional statements by frequency of mention by teachers shows that 67 (53%) are listed by single teachers. Teachers generally articulate these as norms, such as 'teachers must be fit and healthy', 'teachers must spell correctly on the board', 'teachers must not compare learners publicly', 'teachers must not be intoxicated during school hours' and 'teachers must avoid creating and participating in cliques'. The frequency analysis indicates that teachers' have heterogeneous views about how they should conduct themselves in the different dimensions of teachers' work.

An indication of the heterogeneity of teachers' views is the occurrence of institutional statements that contradict each other. Five teachers, for example, list that 'teachers must not shout or scream at learners or else they will have a negative impact on their learners' and five others mention that 'teachers may shout at their learners'. Another example is teachers list contradictory norms prescribing their actions with respect to assessment of learners. There were four contradictory institutional statements prescribing the actions teachers are obligated, prohibited and permitted to assess learners, namely 'teachers must not give 'fake' marks', 'teachers must not provide their learners with answers during an examination', 'teachers may manipulate the assessment regimen to allow their

[57] The institutional statements teachers listed in the interviews were grouped into the following dimensions of teachers' work: assessing teaching outcomes, controlling classroom interactions, controlling teachers' conduct, delivering curriculum content, interacting with parents, participating in extracurricular activities, performing administration, permitting independent learning and teaching competencies.

learners to maximise their overall marks' and 'teachers may help learners with completing an assessment task'.

Analysis of the 126 institutional statements by the various dimensions of teachers' work reveals that a large number of them prescribe how teachers should control classroom interactions (37 institutional statements), followed by how they should conduct themselves as teachers (29 institutional statements) and how they should deliver the curriculum content (27 actions). This analysis indicates that teachers consider controlling classroom interactions as more complex than delivering the curriculum and require more rules and norms to help them navigate their relationship with learners. The Grade 7 English teacher from School C, for example, had adopted numerous norms to structure her interactions with learners:

> You must not hit. You must not insult. You must not use vulgarity. You know your basic human rights. You have to enforce them…
>
> I would think a teacher must not destroy a child's confidence. I think confidence is so important. You know there are so many ways that you can destroy a child's confidence and once you destroy the child's confidence it's a barrier that that child will have going forth forever. So, it's one thing and it's a must do, it instils confidence rather than destroy. Yes, you would experience a learner who challenges you but as the educator and the adult in the interaction process I would think that you need to put that learner's psyche above yours (excerpt from the Transcript of Interview with Grade 7 English Teacher from School C).

Analysis of the 126 institutional statements by school confirm the general trend across schools that most institutional statements are enumerated by a single teacher. It indicates that teachers are heterogeneous within and across schools.

The analysis of the 126 institutional statements by school also shows that roughly half the institutional statements are shared with teachers from the other two sample schools. In the case of School A, 67% of the institutional statements also occur in Schools B or C, in School B 47% of the institutional statements also occur in Schools A or C and 49% of the institutional statements in School C also occur in Schools A or B.

There are four instances where institutional statements occur relatively frequently in a school and does not occur in the other two schools. Six teachers in School B list 'teachers must not show favouritism among learners'. In School C, three teachers list 'teachers must manage their temper during school hours', four teachers list 'teachers must attend school regularly' and four teachers list 'teachers must be punctual in their school attendance'. While the study did not explore the reasons why teachers adopt the various institutional statements, the interview data show that the heterogeneity of learners in the classroom affects their actions in a lesson. The institutional statements 'teachers must not show favouritism among learners' and 'teachers must manage their temper during school hours' unique to Schools B and C respectively seem to suggest that these prescriptions allow teachers in Schools B and C to cope with the heterogeneity of learners.

One can also make an argument that the institutional statements 'teachers must attend school regularly' and 'teachers must be punctual in their school attendance' which were made by school managers from former House of Delegates schools are a legacy of the House of Delegates that had imposed strict bureaucratic accountability measures in schools under its jurisdiction. There is ample literature about the 'bimodal' nature of the South African education system (Fleisch, 2008; Taylor, 2010; van der Berg, 2008) with schools located in historically White and Indian townships demonstrating more bureaucratic functionality than those in historically African and Coloured schools.

Further analysis of the institutional statements reveals 12 that occur in all three sample schools. These are also among the most frequently occurring institutional statements across the three sample schools. They prescribe actions that teachers are obligated, forbidden and permitted to choose in a lesson. They do not include prescriptions for the other dimensions of teachers' work. Consequently, the study defines them as the shared institutions-in-use that teachers "know and use" to structure lessons (Ostrom, 2005, p. 172).

The next section describes and analyses the 12 shared institutions-in-use teachers adopt to regulate their behaviour in a lesson.

6.3 Shared Institutions-in-Use

The 12 shared institutions-in-use that teachers adopt to regulate their conduct in lessons are listed in Table 6 below. They are listed by frequency of occurrence, dimensions of teachers' work they prescribe, type of institution-in-use and whether it is a rule or a norm as strictly defined by the institutional grammar tool (IGT) (Crawford & Ostrom (1995).

Table 6: Shared institutions-in-use by frequency, dimensions of teachers' work, type of institutional statement and norm/rule.[58]

Shared Institutions-in-Use	Frequency	Dimensions of Teachers' Work	Type of Institution-in-Use	Norm/Rule
Teachers must not administer corporal punishment to learners or else they will be charged with assault by the police and may lose their job.	18	Controlling classroom interactions	Choice	Rule
Teachers must be prepared for lessons so that they can manage learners to deliver the curriculum at the required pace or else they will be sanctioned by their head of department and district subject advisors for noncompliance with the prescriptions of the Curriculum and Assessment Policy Statement (CAPS).	17	Delivering curriculum content	Choice	Rule
Teachers must ensure that all learners understand all the objectives of the lessons that they deliver.	12	Teaching outcomes	Scope	Norm
Teachers must be strict with learners for learners to respect their authority.	8	Controlling classroom interactions	Choice	Norm

[58] Author's classification.

Shared Institutions-in-Use	Frequency	Dimensions of Teachers' Work	Type of Institution-in-Use	Norm/Rule
Teachers must not verbally abuse learners because it will have a negative impact on learners.	7	Controlling classroom interactions	Choice	Norm
Teachers must design transparent lesson plans with clear aims and objectives.	7	Delivering curriculum content	Choice	Norm
Teachers must not shout or scream at learners because it will have a negative impact on learners.	5	Controlling classroom interactions	Choice	Norm
Teachers must know the subject content knowledge they teach.	4	Teaching competencies	Boundary	Norm
Teachers must be patient with learners.	4	Controlling classroom interactions	Choice	Norm
Teachers must make lessons fun.	4	Delivering curriculum content	Choice	Norm
Teachers must manage lesson time to accommodate slow learners and comply with the prescribed pace of curriculum delivery.	3	Delivering curriculum content	Choice	Norm
Teachers must establish classroom rules.	3	Controlling classroom interactions	Choice	Norm

Table 6 shows that 11 of the shared institutions-in-use prescribe three dimensions of teachers' work, namely delivering curriculum content, controlling classroom interactions and teaching outcomes. The twelfth shared institution-in-use prescribes the

competence of a teacher to teach: ‘teachers must know the subject content knowledge they teach’.

In accordance with the IAD framework that shows how institutions-in-use structure an action situation (see Figure 4 in chapter three), the 12 shared institutions-in-use prescribe three elements of the lesson. These elements are participants (boundary rules), actions (choice rules) and outcomes (scope rules). The shared boundary institution-in-use prescribes the competences required for a teacher to teach, the shared choice institutions-in-use prescribe the actions teachers are obligated, prohibited and permitted to choose in a lesson and the shared scope institution-in-use prescribes the potential outcomes they can attain.

A significant finding from the frequency analysis is that teachers articulate two frequently occurring shared institutions-in-use as rules, as defined by the IGT (Crawford & Ostrom, 1995). These are:

1. ‘Teachers must not administer corporal punishment to learners or else they will be charged with assault by the police and may lose their job’.
2. ‘Teachers must be prepared for lessons so that they can manage learners to deliver the curriculum at the required pace or else they will be sanctioned by their head of department and district subject advisors for noncompliance with the prescriptions of the CAPS’.

The above shared institutions-in-use are adapted from rules-in-form abolishing corporal punishment in schools (National Education Policy Act 27 of 1996 (NEPA 1996) (Republic of South Africa (RSA), 1996a); South African Schools Act 84 of 1966 (SASA, 1996) (RSA, 1996b) and prescribing the pace of curriculum delivery of the CAPS gazetted in 2011 (Department of Basic Education (DBE), 2011). Teachers report that these rules-in-form are closely monitored and the sanctions for noncompliance are harsh. Learners and parents closely monitor the abolition of corporal punishment rule-in-form and parents sometimes bring in the police to lay assault charges against teachers who disobey it. Heads of departments in schools and subject advisors from the Johannesburg Central Education district closely monitor curriculum delivery. While teachers do not articulate specific sanctions for noncompliance with the prescriptions of the CAPS, they indicate that they may face dismissal and do not want to be seen as

noncompliant. These findings indicate that teachers will adopt rules-in-form that are regularly monitored and where the sanctions for noncompliance are harsh as shared institutions-in-use. This finding confirms Ostrom's (1986, p. 6) claim that "enforcement is necessary for a law to become a rule." In other words, teachers adopt rules-in-form when they understand the law and they are held accountable for disobeying it.

The subsections below present and analyse the 12 shared institutions-in-use under the subheadings of types of institutions-in-use. The meaning of the shared institutions-in-use are informed by additional qualitative analysis of the data and therefore includes excerpts from the interviews and excerpts from which institutional statements were extracted.

6.3.1 Shared Boundary Institution-in-Use (Participants)

Boundary institutions-in-use prescribe who is eligible for a position, the criteria and processes that determines which eligible participant may enter positions and how they can leave a position. In cases of participants being individuals, the boundary rules may also prescribe attributes they should possess to be eligible for a position in the action situation. These may include qualifications, school where they graduated, number of years of experience, range of experiences, age, physical standards, live in a certain geographic area, among others.

Teachers listed one shared boundary institution-in-use: 'teachers must know the subject content knowledge'. It obligates teachers to understand the subject content knowledge they teach to be a teacher (a participant in the lesson). Teachers believe that knowing the subject content knowledge they teach will help them to assert their authority in the classroom. In doing so, it will help them have better control over classroom interactions as the Grade 1 teacher from School C explains:

> Having a good knowledge of your content because, like I said, that the better you are prepared the more hold of the class you have (excerpt from Transcript of Interview with the Grade 1 Teacher from School C).

Similarly, all three principals strongly believe that there is a relationship between knowing the subject content knowledge and classroom control. The principal from

School B, for example, believes that knowing the subject content knowledge will give teachers confidence in the class which will make all other aspects of teaching easier:

> Know the subject that you are going to teach because that is the first confidence builder to you as an educator because anything else is secondary (excerpt from the Transcript of Interview with Principal from School B).

However, some of the teachers interviewed across the three sample schools are allocated subjects that they were not trained to teach in their preservice training. This may explain the reason for the principal from School A linking preparation with knowing the subject content teachers intend to introduce in a lesson:

> They need to know their subject first of all. It's senseless that you go into your class and you don't understand yourself, your subject or you don't know your subject, they need to be prepared (excerpt from the Transcript of Interview with Principal from School A).

6.3.2 Shared Choice Institutions-in-Use (Actions)

Choice institutions-in-use prescribe the actions that teachers are obligated, prohibited and permitted to choose in a lesson at a particular point in the decision process in a lesson in light of conditions at that point.

The seven shared choice institutions-in-use prescribe two dimensions of teachers' work, namely: controlling classroom interactions and delivering curriculum content. These are presented in order of frequency of occurrence.

Teachers Must Not Administer Corporal Punishment to Learners Or Else They Will Be Charged with Assault By The Police and May Lose Their Job

The shared choice institution-in-use that is foremost in teachers' minds is that 'teachers must not administer corporal punishment to learners or else they will be charged with assault by the police and may lose their job'. It prohibits teachers from administering corporal punishment, which teachers in the main attempt to comply with as the teacher from School B succinctly puts it:

> The must not [do's] is corporal punishment which is called assault because you [will] lose your job, that is a must not (excerpt from the Transcript of Interview

with the Grade 4 and 5 Natural Science and Technology Teacher from School B).

Teachers fear arrest by the police for assault and dismissal for noncompliance with the prohibition of corporal punishment rule-in-form. Nonetheless, there appear to be ongoing incidents of teachers losing their temper with a learner and administering corporal punishment. The principal from School A tells of an incident that occurred at the school during the week of fieldwork:

> For instance, I had one of my colleagues, I won't mention his name, gave a girl a hiding and the father was furious, he came with the police and I was glad he wasn't here when the father phoned. The father phoned the Friday afternoon and the teacher had already left and I said to him "sir the teacher is not here but what I will do is on Monday morning I will speak with and find out what happened and feel free to come to the school" and he actually came but he came with the police but that actually gave me the opportunity to speak to the teacher before the father got here. He apologised for what he did, but he could explain so I had his back because knowing our children also, some of our kids can push your buttons (excerpt from Transcript of Interview with Principal from School A).

There is a belief among teachers in the study that in their school contexts corporal punishment is an effective form of sanctions compared to alternative forms of discipline promoted by the Gauteng Department of Education (GDE). The teachers from School A, for example, argue that these alternative forms of discipline such as withdrawing incentives from learners do not hold because their school offers few privileges that learners may value, such as fieldtrips:

> **Teacher 1:** Right now, we given a limit, you can't even chase the child outside the classroom when it's misbehaving because they will capture pictures and next thing you are in the newspapers, so discipline is a big, big issue.
>
> **Teacher 2:** But let's look at this demerit system in a private school, you said it works in a private school and I agree because in the beginning of the term, the teacher will walk in and say everybody that has demerits in excess of this will not go on an excursion and we don't have excursions. Exactly, what are you going to demerit him about? Are you going to say when you have 20 demerits,

> you going to stand outside the class? So, that is why we don't have an alternative. That is why it is not working.
>
> **Teacher 3:** There are no disciplinary measures that we are given, the correct ones to use. They [GDE] just leave us like that, you understand?
>
> **Teacher 2:** And that's why people hit the children at the end of the day. They hit the children because you are worked up to such an extent that you hit the child (excerpt from the Transcript of Interview with Small Group Interviews in School A).

The consensus among teachers in the study is that the GDE has not provided them with alternative forms of sanctions that are effective in their contexts. The top-down approach to policy formulation and implementation that Christie (1998) identified as problematic in the early years of the National Department of Education (NDoE) remains contentious two decades later. Teachers feel the abolition of corporal punishment without providing effective alternative forms of sanctions in their contexts of overcrowded classes, with learners with heterogeneous preferences for classroom interactions, has disempowered teachers and reduced their capabilities to discipline learners or create order and stability in a lesson. The Grade 7 Xitsonga teacher from School B explains this feeling:

> So, my challenge is discipline in the class during teaching. We don't have alternative [to corporal punishment]. They have abolished corporal punishment. The department is not giving us support about discipline and sometimes I can lose my temper since we are human. Discipline is the most important thing that we don't have a handle [on]. For example, I posted class rules over the classroom and I repeat it. The learners think it's a joke. Although we developed the rules together. But still the problem but they don't follow them (excerpt from the Transcript of Interview with Grade 7 Xitsonga Teacher from School B).

The rules-in-form prescribing the due processes required for sanctioning learners in configuration with learners' right to education appear to disincentivise teachers from devising alternative forms of sanctions for learners who disobey the schools' code of conduct and who engage in antisocial behaviour. Sections 8 and 9 of SASA, 1996

(RSA, 1996b) require that school codes of conduct must include provisions of due process and processes for conducting disciplinary proceedings that safe-guard the interests of the learner.

The Grade 4 and 5 natural science and technology teacher from School B, for example, argues that the rules-in-form that prescribe sanctions and due processes have significantly reduced their options. As a result, she believes that teachers no longer know how to sanction learners: "the discipline is a very huge problem because our hands are tied; you don't know how to discipline these learners. You take them outside and that is not allowed." The Grade 5 mathematics teachers from School C for example interpreted the constraints prescribed by rules-in-form for sanctioning learners as "punishment is not allowed":

> **Teacher:** I just feel that sometimes it's necessary to give those learners that are defiant and rude some form of punishment. Like maybe it's your turn to being so rude and so just pick up all the chairs at the end of the lesson onto the table and empty out the dustbin. Little forms of punishment because you know what, they must know the reason they are being punished.
>
> **Interviewer:** But is that not a must? I am just curious. Is it not a must?
>
> **Teacher:** No, we're not allowed to. Corporal punishment is not allowed.
>
> **Interviewer:** How do you punish them?
>
> **Teacher:** Punishment is not allowed. We are so restricted in trying to implement discipline and order in the class because we do have unruly kids, kids that really throw our lesson off the rail. Like the 5C class that came in, there are about five learners in that class that are really rude and they disrupt the entire class and the entire lesson and it's so hard. If you could get those five learners to behave then you will have such a good lesson. It's so difficult (excerpt from the Transcript of Interview with the Grade 5 Mathematics Teacher from School C).

Teachers report that the absence of effective sanctions for learners who disobey school and classroom rules is also affecting their morale. The intermediate phase life skills teacher from School B captures this view among teachers:

> Because I love teaching a lot, the thing that is bothering me and the thing that I think if I had two options, to have another job or this the only thing that can make me quit is the behaviour of these kids because they make your teaching difficult since they know that there's no corporal punishment so they do and say anything that pushes you up to the level that you say that I can even quit teaching. Other than that, I really love teaching them (excerpt from the Transcript of Interview with Intermediate Phase Life Skills Teacher from School B).

For the Grade 2 teacher from School B, the absence of effective sanctions challenges her values of justice which in turn affects her emotional well-being. She feels hurt that she cannot sanction a learner who bullies another learner to discourage such behaviour and administer justice:

> And sometimes when other kids bully other learners you feel hurt when you're not doing anything as a teacher. You just say: Sorry my dear. I feel hurt for the innocent kids (excerpt from the Transcript of Interview with Grade 2 Teacher from School B).

Teachers observe that in the absence of effective sanctions for learners who contravene school and classroom rules and take actions that are considered antisocial, they do lose control over their emotions. They administer corporal punishment, shout at learners and verbally abuse learners. To prevent this behaviour a few teachers believe that they should be permitted to administer corporal punishment. This is similar to what Mayisela (2018, p. 304) found: "teachers seemed to support the widely held view that corporal punishment used in a mild form and with love is better than no corporal punishment at all." Teachers do not stipulate the conditions for permitting the administration of corporal punishment, as the intermediate and senior phase life skills teacher from School B explains:

> The maybe is to put them in the right path for instance to discipline them basically it's to discipline them. Sometimes you don't have straight ways of disciplining them maybe you will end up doing the things that you must not do like hitting them. You know that it's not right but you do it anyway. That is a maybe. Sometimes you even shout at them in a way that you feel that I

> shouldn't say that but you say it anyway because you got angry. You know these kids can make you angry in a way that sometimes you lose it. So those are maybes (excerpt from the Transcript of Interview with Grade 4/5/7 Life Skills Teacher from School B).

Teachers Must Be Prepared for Lessons so that They Can Manage Learners to Deliver the Curriculum at the Required Pace Or Else They Will Be Sanctioned by Their Head of Department and District Subject Advisors for Noncompliance with the Prescriptions of the Curriculum and Assessment Policy Statement

The second most frequently occurring shared institution-in-use prescribes that: 'teachers must be prepared for lessons so that they can manage learners to deliver the curriculum at the required pace or else they will be sanctioned by their head of department and district subject advisors for noncompliance with the prescriptions of the Curriculum and Assessment Policy Statement'. It obligates teachers to prepare for lessons. Teachers believe that being prepared for lessons will enable them to control classroom interactions and deliver the curriculum at the prescribed pace. It also means mapping out all the actions they will take during the period and the sequence thereof. This they believe will help the teacher to remain focused and keep learners occupied so there will be little time for them to engage in disruptive behaviour. The School C Grade 7 English teacher describes the multiplier effect of good preparation in teaching:

> So, when you are prepared, and you have a structured lesson for them [learners] it just adds to meaningful interaction. It eases discipline in the classroom because they are kept occupied. They are kept busy all the time so there's no reason for learners to be easily distracted. And when you have that meaningful interaction in class you find that that's where your love for your job kicks in because especially in the English class you can discuss so many different concepts and their views and teach them how to be confident about expressing their views (excerpt from the Transcript of Interview with the Grade 7 English Teacher from School C).

As the Grade 7 English teacher from School C believes, there is a positive relationship between being prepared and enjoying teaching. The Grade 3 teacher from School B captures this belief:

> So, you need to plan, you need to plan everything. Even plan the examples which you're going to give; you need to be well prepared in class so that you can enjoy yourself in class because if you're not planning anything, you won't enjoy the lesson (excerpt from Transcript of Interview with the Grade 3 Teacher from School B).

Teachers report that learners are very perceptive and know when a teacher is unprepared for a lesson. In these instances, learners appear to be less compliant with teachers' instructions and more disruptive, as described by the Grades 4 and 5 natural science and technology teacher from School B:

> You need to be prepared, very prepared when you're going to a class because it's like these children when you get into the class, they see when you're prepared, and they see when you're not prepared, that is when they will disturb your lesson. It is also very important that when you're prepared as teacher you keep them busy like always keep them busy" (excerpt from Transcript of Interview with the Grades 4 and 5 Natural Science and Technology Teacher from School B).

Teachers attempt to comply with the prescribed pace for curriculum delivery because it is monitored by heads of departments and district subject advisors. Teachers fear that noncompliance may result in them facing disciplinary action as the head of department for Afrikaans from School C explains:

> You must cover your curriculum. If that is not done you can be called out to a disciplinary hearing and it could be taken up with Labour [Department of Employment and Labour] (excerpt from the Transcript of Interview with the Afrikaans Head of Department from School C).

Teachers also believe that lesson planning helps them to remain focused in a lesson, as the Grade 2 teacher from School B explains:

> So, planning your own lesson for me it's good because when you come as a teacher you know that, okay, today I am going to focus on this sum and only this sum. By the end of the day when you do the reflection you want learners to understand. Were they responding? Did you give the learners a chance to answer

> your questions? Were the learners given an activity? (excerpt from the Transcript of Interview with the Grade 2 Teacher from School B).

Teachers Must Be Strict with Learners for Learners to Respect their Authority

The shared institution-in-use 'teachers must be strict with learners for learners to respect their authority' obligates teachers to behave in an authoritarian manner in the class. They believe that adopting a strict demeanour will assert their authority and obtain compliance from learners as the Grade 5 life skills teacher from School A explains:

> You have to be strict because if you are not strict these kids will play around. Not to basically punish them but you must put your foot down, that you must do. If you don't, kids are always kids (excerpt from the Transcript of Interview with Grade 5 Life Skills Teacher from School A).

This view is echoed by her principal who advocates that "you can't be too friendly with the kids" and that teachers must establish classroom rules that are "on a continuum between autocracy and democracy."

In practice teachers implement the shared institution-in-use 'teachers must be strict with learners for learners to respect their authority' by limiting interactions between learners and the teacher in the classroom, as the Grade 7 economic and management sciences teacher from School C explains:

> I tell them I will be your best of friends but the minute you put your foot on the mat outside [the classroom door it] is work. Outside I will even skip with you and whatever games or whatever you want to speak about, I am there for you and I managed to get it right that work is work and whatever else you need don't be afraid. That is what I am there for (excerpt of Transcript of Interview with the Grade 7 Economics and Management Science Teacher from School C).

Teachers Must Not Verbally Abuse Learners Because It Will Have a Negative Impact On Learners

Teachers adopt the shared choice institution-in-use 'teachers must not verbally abuse learners because it will have a negative impact on learners' to prohibit themselves from making statements that may be hurtful for learners. Teachers are acutely aware that in

the absence of effective forms of sanctions for learners who disobey classroom rules and engage in antisocial behaviour they are likely to lose their temper and say something that is harmful to learners, as the Grade 2 teacher from School C explains:

> I would say not being unkind to these kids because I know we are under so much strain like you saw today. We have kids running about and it takes a lot not to lose your cool and not do damage. Because at the end of the day we might not realise it but the emotional scar that you can do to a child just by constantly putting them in a corner, so as much as I want to lose my temper with this little one here and tell him something ugly sometimes, you have to have that restraint. You have to think of them as your own children, the moment you don't, that's the only must not (excerpt from the Transcript of Interview with Grade 2 Teacher from School C).

The shared choice institution-in-use 'teachers must not verbally abuse learners because it will have a negative impact on learners' may also indicate that teachers are well aware of their power over learners and the potential for abusing this authority. As such, it also serves to limit their authority, as illustrated in the comment by the Grade 7 English teacher from School C quoted in the previous section that "a teacher must not destroy a child's confidence."

Teachers Must Not Shout or Scream at Learners Because it Will Have a Negative Impact on Learners

The shared choice institution-in-use 'teachers must not shout or scream at learners because it will have a negative impact on learners' prohibits teachers from shouting and screaming at learners. As with the previous shared institution-in-use, this shared institution-in-use also places limitations on teachers' authority.

While teachers believe it is wrong to shout and scream at learners, in practice teachers do shout at learners as a form of sanction, as the foundation phase life skills teacher from School C explains:

> Disciplining learners, as you can see that nowadays it's difficult to discipline learners. They are violent and there's no corporal punishment. You have to shout at them or draw their attention by doing something else so that they can

> concentrate on what you are teaching at that moment (excerpt from the Transcript of Interview with Foundation Phase Life Skills Teacher from School C).

Teachers also shout at learners to focus their attention on the teachers' instructions as the Grades 4 and 5 natural science and technology teacher from School B explains:

> The must not is shouting at these learners but I shout and they hear me better when I shout. Like: 'Do your work!'. That is how they hear me. They know that I have got the loudest voice. They know that: 'Mam Palesa has the loudest voice'. The must nots is shouting at them but I do it because it helps them (excerpt from Transcript of Interview with the Grades 4 and 5 Natural Science and Technology Teacher from School B).

Shouting at learners adversely affects teachers. It exhausts them and increases their stress levels as the Grade 4 mathematics teacher from School A puts it: "if you shout at them, you [are] going to be drained."

Teachers seem to believe that they cannot reason with learners and that learners respond to their instructions only when they shout at them, as the isiZulu teacher from School B explains:

> When you're teaching and the kids don't want to listen, making noise. They want to move around while you're teaching and again as you know that corporal punishment is not allowed. It makes it so difficult to deal with them because we have to shout all the time. If you speak to them nicely they don't listen (excerpt from Transcript of Interview with the isiZulu Teacher from School B).

Teachers Must Be Patient with Learners

The shared choice institution-in-use that prescribes 'teachers must be patient with learners' also limits teachers' authority. It obligates them to choose patience as an additional means to control their emotions. They believe patience enables teachers to deal between and with the constant motion and unpredictability of learners' behaviour and the uncertainty it creates. In doing so, being patient with learners helps teachers to maintain decorum and comply with rules-in-form regulating professional conduct. The

Grade 1 teacher from School B explains how this shared choice institution-in-use helps her to remain in control of her emotions:

> So, for me those are the musts and you must be very patient, patience is key, sometimes even if you can see that you're losing it, you just need to be able to breathe in and out and control it. Patience is key (excerpt from the Transcript of Interview with Grade 1 Teacher from School B).

Teachers Must Design Transparent Lesson Plans with Clear Aims and Objectives

The shared choice institution-in-use: 'teachers must design transparent lesson plans with clear aims and objectives' obligates teachers to formulate lesson plans. Teachers report that they design their lessons according to the prescriptions of the CAPS. They stipulate the new curriculum content they will introduce in a lesson and the number of learning tasks (which they refer to as activities) they will assign to learners in a lesson. Teachers explain that the heads of departments in their schools and the district subject advisors monitor curriculum delivery by counting the number of learning tasks in learners' exercise books. This narrow bureaucratic accountability measure to monitor curriculum delivery appears to produce perverse outcomes because teachers interpret the number of learning tasks prescribed by the CAPS for a topic or lesson or week or term as discrete activities, instead of a means of offering learners a continuous set of opportunities that will facilitate understanding new curriculum content. Two Grade 3 teachers from School A describes this practice:

> When the department [district subject advisor] comes in to check and see if everything is up to standard, they check if they [learners] have done all the 10 activities in this lesson instead of going to the teacher and asking which strategy was used …
>
> … you left with 3 more activities so it's like "what do you want to do now"? You just add on to make sure that when the department [subject advisor] comes you have your activities" (excerpt from Transcript of Small Group Interview with the Grade 3 Teachers from School A).

Similarly, the Grade 5 natural science and technology teacher from School A explains that she interprets this policy prescription as teaching by discrete activities:

Teacher: I have to make sure I have plus minus seven activities per week, so it gets a lot…

Interviewer: Tell me about the seven activities. What does that mean?

Teacher: Okay, this now is basic of what I mean by seven activities. So, then the investigation, I'm going to give you an example, when it comes to natural science and technology, every period is supposed to have one activity. So, because they are saying plus minus seven activities per week that means we must have plus minus seven periods per week and in that the children need to cover, so we can do notes, but the children have to actually understand the work so they must understand and them understanding the work you can see through those activities.

Interviewer: So, they must do the actual task like?

Teacher: Yes, so they don't have to do a physical task. Sometimes you can just give them two - three questions on something and then they answer it and then it's okay but because it's natural science and technology, so its natural science so they can answer but then it's technology as well, so they have to do the physical projects as well (excerpt from the Transcript of Interview with Grade 5 Natural Science and Technology Teacher from School A).

Another outcome of the narrow bureaucratic accountability measure is that teachers seem to understand introducing new curriculum content and assigning learning tasks as two distinct actions. They do not seem to consider learning tasks as a mechanism for delivering the curriculum content. Consequently, teachers believe that they need to manage the lesson time to introduce new curriculum content and assign a learning task for learners to complete in the lesson. A few teachers report that they struggle to achieve doing both in a single lesson and find alternative configurations of allocation of lesson time. The Grade 7 economics and management sciences teacher from School C, for example, uses some lessons for introducing new curriculum content only and others are allocated for doing learning tasks:

Like EMS [economics and management science], for example, minimum is three activities per week. I have four periods per week. That means I must teach

> in one period and the other three periods I must do work; they [employer] don't want me to explain properly. So, you find yourself teaching or I find myself teaching at least one hour from the two hours I get. So, I battle to cover my activities because I still have to cover my teaching part (excerpt from the Transcript of Interview with Grade 7 Economics and Management Sciences Teacher from School C).

A few teachers report that they use the lesson plans provided by the GDE, as the Grade 1 teacher from School C explains:

> Now the department has intervened, and they send our curriculum and our lesson plans, so we are practically coming into the class and we are just teaching. Here is an example of it, they give us a week and they tell us what concepts we're doing for that week, so these things make it easier because before we used to do it (excerpt from Transcript of Interview with the Grade 1 Teacher from School C).

Teachers Must Manage Lesson Time to Accommodate Slow Learners and Comply with the Prescribed Pace of Curriculum Delivery

The shared choice institution-in-use 'teachers must manage lesson time to accommodate slow learners and comply with the prescribed pace of curriculum delivery' puts limitations on how they allocate time in their lesson. The term "slow learners" is used to describe a learner who loses concentration easily in a lesson, acquires new curriculum content at a slower pace than the prescribed pace and takes too long to complete the assigned learning tasks in the allocated time in a lesson.

Teachers complain at length that the prescribed pace of curriculum delivery is unfair in classes with learners who have different capabilities and acquire knowledge at different rates. The Grade 5 mathematics teacher from School C explains the heterogeneity of learners in a class: "but here we are expected to keep the same pace with learners of different cognitive levels." Consequently, teachers find it extremely difficult to balance both complying with the prescribed pace and accommodating slow learners. This induces pressure on them as the Grade 1 teacher from School B explains:

> Sometimes as a teacher you have expectations, you plan your things ahead, this is where I want to be in the next three weeks and this is what I want to do but the thing is that it never goes according to plan because you can't move along when kids are still not understanding what you're trying to teach in Grade 1, so that just makes it difficult and frustrating that, oh, my god, you feel like you're in backlog and at the same time you don't want to move on when they don't understand, so it makes it very difficult and you end up having a lot of pressure (excerpt from the Transcript of Interview with Grade 1 Teacher from School B).

A few teachers report that they use the slow learners as a 'steering criterion group', (Dahllhof & Lundgren, 1970) as explained in the comments below by the Grade 4 life skills teachers from School A and the Grade 2 teacher from School C respectively:

> We have 12 periods in a day. Each one takes 30 mins only. Thirty minutes is less, very less because after the learners enters the class, you have to make them settle, after a settling and maybe a period of five minutes that's when you start to teach the day's lesson and you have to be quick with that but you can't be quick here in primary because it is still children. So many of them end up not understanding if you work at a very quick pace so you need to go with their pace (excerpt from Transcript of Interview with the Grade 4 Life Skills Teacher from School A).

> I notice that when I am teaching, not so much focus on my bright learners because I know they can get it, I look more to my weaker side then as I am teaching I have to see how they are and how they are interacting with me. Because I know if they are just going to sit quietly and look at me then I know that they are lost. Those are the ones that I have to ask questions (excerpt from Transcript of Interview with the Grade 2 Teacher from School C).

The principal of School A believes that teachers at her school teach to slow learners and are not using their time efficiently. She feels that they allow their learners too much latitude with respect to completing the learning tasks in their exercise books which in turn impacts on the pace of curriculum delivery and curriculum coverage:

> From this time to this time we have to do maths and I know that they allow the children to take too long with a certain subject and that hampers them from

> finishing their work on time, and then we say that the children are slow but we [are] allowing them that time to take forever to do a thing so the routine also needs to be really strict in class and also learning every single day (excerpt from Transcript of Interview with Principal from School A).

Teachers appear to resolve this dilemma of curriculum pace and slow learners in five ways. In the first way, they accept that some of their learners will not complete the assigned learning task in the allocated time or fully understand the prescribed curriculum content. The Grade R teacher from School C explains accepting these outcomes:

> If there are kids that have fallen behind or don't understand a certain concept it is not easy for me to go back to that because already the next day I have things or activities that I have to tick off and make sure that they done. So, in terms of making sure that teachers do what they have to do, I guess it's good but it becomes very difficult for us because now we are chasing work that needs to be done and ticking it off (excerpt from the Transcript of Interview with Grade R Teacher from School C).

In the second way, teachers seem to simplify the curriculum because it takes too much time to explain complex terms, especially when learners are not proficient in the language of learning and teaching (LoLT). Teachers report that learners in their classes speak diverse home languages and are generally not proficient in English – the LoLT. The Grades 4 and 5 natural science and technology teacher from School B summarises this as "sometimes the language barrier, mostly in our school we have got people from Lesotho, from Zimbabwe." The Grade 2 teacher from School C explains that she simplifies the curriculum to overcome learners' weak proficiency in English:

> Honestly, I don't even know if there's anything easy about teaching. I don't know especially with these little ones because there's like absolutely everything that you have to explain to them. Like the simplest of words, I can't even say for "instance" and they are going wonder what is that, when I am doing the exam paper with them I can't use these words I have to put it in the simplest of terms for them (excerpt from the Transcript of Interview with the Grade 2 Teacher from School C).

The third way teachers appear to resolve it is to choose assessment tasks that slow learners are able to complete to improve learner performance. The Grade 5 mathematics teacher from School C, for example, sets a simple data handling learning task in the third term to boost learners' overall performance:

> I have been doing data handling assessment, it's such an easy assessment, there's just three questions to it and you carry a mini survey and you do a tally table and from the tally table you do a bar graph. , it's a lead on question. The reason why we do [it] is that in term three, we do it because we want to boost marks, it's the most simplest of assessments (excerpt from the Transcript of Interview with Grade 5 Mathematics Teacher from School C).

In the fourth way teachers may be disingenuous about complying with the prescriptions of the CAPS, as the deputy principal School C explains:

> Teachers resort to giving marks for an oral in speech and it's a teacher that has been teaching for 25 years. She has speech marks for every learner and the parents come and say: 'My child never said a speech.' So, we called the teacher in and said: 'When did you do this?' She says: 'I didn't get a chance, but I know how they talk and that is how I gave them marks'. So that is how she justified herself. We have those kinds of challenges, which make you very angry (excerpt from the Transcript of Interview with the Deputy Principal from School C).

In the fifth way, the Grade 7 mathematics teacher runs extra classes on Saturdays to do revision and maintain the pace of curriculum delivery:

> For me to cover this curriculum, like I said that I live around the corner, I come on a Saturday morning and I tell the children to come. After that 200 children, would you believe that I get 150 children on a Saturday from Soweto and I don't charge them a cent. Free. I give Maths tuition to anybody, at no charge. I get 150 children, I do two shifts, 3 hours with the boys first and the second shift is 3 hours with the girls. I start in the mornings. I know that last time I did 3 Saturdays. So, whenever I get to catch up with the curriculum, I managed to cover that work (excerpt from the Transcript of Interview with the Grade 7 Mathematics Teacher from School C).

Teachers Must Make Lessons Fun

Teachers believe that learning must be fun and adopt the shared choice institution-in-use that 'teachers must make lessons fun'. The notion of "fun lessons" refers to choosing learning tasks that require active participation from learners. The Grade 3 teacher from School A, for example, defines fun lessons as bringing in her tape recorder for learners to listen to rhymes and to sing along:

> I bring my tape recorder and let them listen from the radio. I put the rhyming songs there. Just listening to it, it makes them more interested to the other lessons to come, the topic of the week; but to make them to listen to the music or the rhymes it motivates them (excerpt from the Transcript of Small Group Interview with Grade 3 Teachers from School A).

Similarly, the Grade 5 natural science and technology teacher from School A explains that when learners are active they are more likely to learn:

> Last year I used the skeleton and I labelled it for them but I saw that they forgot about it. So, for this year what I did is I made them touch it themselves so while I'm teaching every time I'll say "Oh, by the way what is this again? The skull. What do we call the skull again? The cranium?" So, if you ask them all of these things, they will remember (excerpt from the Transcript of Grade 5 Natural Science and Technology Teacher from School A).

Concomitantly, teachers believe that "fun lessons" will require more effort on their part, as the Grade 2 teacher from School C explains:

> **Teacher:** Also, when I am doing something fun you will see that I do have a bit of slow learners but when you do something fun and interesting and if you put an effort in it, you will see how those ones also their faces just light up and they also want to get involved. Like there was this one time just two weeks ago, we did a paper mâché.
>
> **Interviewer:** With a balloon?

> **Teacher:** No, I did it in a cup with them. I had fun doing it and you could see they had fun helping me. And the next day so many of them actually came with their own.
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> **Interviewer:** They went home and did it?
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> **Teacher:** They went home and did it and these are not the bright learners, this was most of my learners in the classroom. When I see that, it kind of lets me know that I am doing something right with them because if they are showing an effort, they must be enjoying my lesson" (excerpt from the Transcript of Interview with Grade 2 Teacher from School C).

However, teachers believe that "fun lessons" will take too long because they will need to explain each part of the learning task because not all learners are proficient in English. This will result in them lagging in delivering the curriculum content at the required pace. The Grade R teacher from School C shares an example of how the heterogeneity of learners in relation to home language adds complex challenges in the lesson:

> I have got a learner who came straight from Venda this year and she didn't know a word of English and she didn't know a word of Zulu [the first language of the teacher]. I don't know a word of Tshivenda. It was very difficult (excerpt from the Transcript of Interview with Grade R Teacher from School C).

Teachers also fear that slow learners are easily distracted and that they will lose control over classroom interactions. Teachers resolve this dilemma by choosing learning tasks that require active participation by learners, accommodating slow learners and managing time to deliver the curriculum at the required pace by making fun learning tasks special events. In other words, learning tasks that require learners to be actively involved rather than to be passively listening to the teacher are not regular occurrences in their classrooms.

Teachers Must Establish Classroom Rules

The shared institution-in-use that prescribes 'teachers must establish classroom rules' is adapted from the rule-in-form in the SASA, 1996 (RSA, 1996b) that obligates schools to adopt a code of conduct for learners after consultation with learners, parents and

teachers at the school. It allows teachers to make explicit the behaviour they expect from learners in the classroom. The Grade 5 mathematics teacher from School B, for example, lists the rules that govern interactions in her classroom:

> No swearing. Respect teachers. Not eating in the class. When you want to answer you must raise your hand. Keep the class clean. No bullying (excerpt from the Transcript of Interview with Grade 5 Mathematics Teacher from School B).

Teachers report that learners do not comply with classroom rules which is part of their struggle to "discipline learners" discussed earlier, as the Grade 6 Xitsonga teacher from School B explains:

> I posted class rules over the classroom and I repeat it. The learners think it's a joke. Although we developed the rules together. But still the problem but (sic) they don't follow them (excerpt of Transcript from the Interview with the Grade 6 Xitsonga Teacher from School B).

Nonetheless, there is consensus among teachers that 'teachers must establish classroom rules' to make explicit the set of actions learners are obligated, prohibited and permitted to take in the class which helps with assigning their respective roles and responsibilities in a class, as the Grade 3 teacher in the small group interview in School A explains:

> I must develop a sense of discipline in the classroom, it's very, very important because if discipline is not developed then definitely I can't teach. So, establishing discipline, establishing rules, establishing your role as a teacher, establishing the sense of role that the learners have in the class and making sure that both sides understand what you stand for and what they stand for (excerpt from the Transcript of Small Group Interview with Grade 3 Teachers in School A).

Teachers prefer their classrooms to be quiet spaces where learners listen to them attentively, always raise their hands to ask permission to take an action and comply with teachers' instructions. The teachers who promote establishing classroom rules are also those who stress the importance of routines in lessons. They seem to interpret the shared

institution-in-use that ‘teachers must establish classroom rules’ as creating lesson routines. The Grade 5 mathematics teacher from School C explains this relationship:

> I feel that having rules and giving out clear instructions. I am very clear with my instructions, the kids know exactly when they come what they need to do. They even know when they leave what they need to do. Having those steps and procedures in place makes the whole process so much easier (excerpt from the Transcript of Interview with Grade 5 Mathematics Teacher from School C).

Similarly, the Grade 5 natural science and technology teacher from School B explains the advantages of classroom rules and routines for a young recent graduate teacher:

> So I think this year it became quite easy for me because I’ve established the ground rules from the get-go. I draw up rules for children and what is very important for me … . You pray. My register class comes in sometimes I send the key for them and they will come themselves to class and the minute any teacher can get here and they will tell you, my children have prayed already because it’s something that I instil (excerpt from the Transcript of Interview with Grade 5 Natural Science and Technology Teacher from School A).

The deputy principal from School C believes that there is a relationship between consistently implementing classroom rules and associated routines and overall discipline. He believes that it is the small actions and behaviours that teachers must consistently implement to facilitate discipline:

> We tell teachers that if you want to have discipline in your class there are certain things that you must do, take the lead and show them the way, enforce it and make sure that it’s consistent, that’s a must. You know some things like lining up outside your classroom before you come in is a must. It’s like you’re coming to my home I will tell them when to sit it’s a must do. You might not take what I am telling you now, teachers are having problems here and when you go past their class and you see that they are not doing the simple things. They are not doing what we said they must do. Line up outside, come to the door, meet the children, leave and make sure you [learners’] push your chairs (excerpt from the Transcript of Interview with Deputy Principal from School C).

The Grade 2 teacher from School A brings her learners to sit on the mat in front of the chalkboard when she introduces new content. It allows her better control over her learners compared to when they sit at their desks:

> **Teacher:** So, each and every class has got a carpet, so when we teach, they sit on the carpet. The reason why; when they sat on the carpet you can monitor them. All of them, you can monitor and that is why when I was teaching them, I was calling them by their names. I can control them when they are there but now when they go and sit it means they are going to run...
>
> **Interviewer: At their tasks.**
>
> **Teacher:** Yes, but when I am teaching while they are sitting there with the table, the other one will be under the table, so the other one is playing with a pencil, so when they come here, they must not have a pencil." (excerpt from the Transcript of Interview with Grade 2 Teacher from School A).

The above routine is promoted by the school principal for all classes in the foundation phase. Teachers are required to follow a cycle during the day in foundation phase – learners sit on the mat in the front of the class when the teacher introduces new curriculum content and then they move to their desks to complete the learning task the teacher assigns.

6.3.3 Shared Scope Institutions-in-Use (Potential Outcomes)

Scope institutions-in-use prescribe the outcomes that teachers intend to achieve in a lesson.

The shared scope institution-in-use 'teachers must ensure that all learners understand all the objectives of the lessons that they deliver' is the third-frequently occurring institution-in-use. The objectives of the lesson according to teachers are that learners understand the curriculum content that they deliver and have evidence of new curriculum content in their exercise books. The Grades, 4, 5 and 7 life skills teacher from School C summarises teachers' outcomes for a lesson:

> The must when I am teaching is to make them understand, that is a must. I can't carry on teaching while I see that they don't understand anything. The must is to make them understand. When they go home, they definitely have something that

> they have learned. That is basically it, that is a must for me, to make sure that they understand and that they have something and that they wrote something (excerpt from the Transcript of Interview with Grades, 4, 5, 7 Life Skills Teacher from School C).

While teachers do not explain how they facilitate learning nor do they talk about how they assess whether learners understand the curriculum content, they believe that offloading the textbook will not facilitate learning. They believe that explaining curriculum content in the textbook and adding examples will facilitate "understanding", similar to Leshota and Adler's (2014) concept of "insertions". The Grade 7 natural science and technology teacher from School B captures this view:

> When I go to each and every class, what needs to be done is that before I walk out of the class, I must make sure that the learner understood what I was talking about. That is a must because it is going to be pointless for me to come to class and just reading from Platinum [name of textbook series] that they give you and most of the time I am not going to come here and say open page 40 read 1, 2, 3. I open page 40 and I read for them and explain to them and sometimes when they are reading I explain to them because it's not about reading and maybe you finish the chapter in two days it's about reading and explaining and giving them examples until they understand what you are talking about (excerpt from the Transcript of Interview with Grade 7 Natural Science Teacher from School B).

Only one teacher hinted at how they assess learners' understanding of the objectives of the lesson – by monitoring whether they are able to complete the assigned learning task:

> A must is that you must [make] sure that these children understand what you teach. That one is a must, and you will know that they understand what you teach by the time you give them an activity sheet to complete in class and they all pass the activity (excerpt from the Transcript of Interview with Grade 4 Life Skills Teacher from School A).

Generally, teachers see marking learners' exercise books as administration and not as assessing teaching outcomes, as the Grade 5 natural science and technology teacher explains:

> When I talk about admin, I need to mark books. I teach two subjects but in the two subjects, I have different strands, so for the natural sciences, it's natural sciences and technology, so as much as I'm teaching one subject, I have to cover everything. I have to mark four classes of books. I have to make sure I have plus minus seven activities per week, so it gets a lot. (excerpt from Transcript of the Interview with the Grade 5 Natural Science and Technology Teacher from School A).

While the CAPS prescribes the number of formal assessment teachers are obligated to administer, teachers do not seem to link formal assessments with the shared institution-in-use 'teachers must ensure that all learners understand all the objectives of the lessons that they deliver'.[59] These are seen as bureaucratic administration or 'paperwork' to show evidence of compliance with the CAPS. Teachers see the prescribed number of formal assessments as time-consuming and distracting them from the work of teaching – delivering the curriculum content. Furthermore, teachers believe the prescribed number of assessments per term and the interventions for underperforming learners and associated statistical reports required by the national strategy for learner attainment (NSLA) are unrealistic in their contexts of overcrowded classrooms.[60] The Grade 7 economics and management sciences teacher from School C describes the impracticality of the assessment regimen and how it reduces teaching time:

> I think last year I did for Afrikaans, for the languages it's worse. You have 10 weeks in a term and you have 10 assessments for the term. It means every week I must be doing an assessment. Which means I do a section in 'taal', Thursday I must assess it. Whereas on Tuesday, Wednesday I have other part of Afrikaans to cover maybe comprehension and whatever else but you did 'taal' on Monday and Thursday you're writing an assessment which is absolutely horrible. I hate it

[59] The CAPS prescribes the number of assessments that teachers must conduct for a subject and grade in a school academic term. This regimen aims to ensure that there is continuous assessment of learner performance and for teachers to timeously provide additional support or interventions to learners who are underperforming.

[60] NSLA obligates teachers to submit quarterly statistics on learner performance and to keep an observation book noting their interventions for learners who are underperforming.

(excerpt from Transcript of Interview with Grade 7 Economics and Management Sciences Teacher from School C).

The belief teachers hold about the assessment regimen being impractical and an administrative burden may explain the contradictory institutions-in-use teachers adopt that prescribe their conduct with respect to assessment discussed in section two above. Teachers listed institutions-in-use that prohibit and permit the manipulation of assessments. The incident where the teacher gave learners marks for an oral examination without conducting it shared by the deputy principal from School C earlier shows these contradictory views teachers hold about assessment.

Concomitantly, teachers recognise the value and spirit of the rules-in-form prescribing continuous assessment of learner performance and the associated interventions; the associated accountability measures such as record keeping and reporting, however, are interpreted as additional administration, as the Grade 2 teacher from School B explains:

> We need to fill in the forms in terms of the learners who are being retained and we're doing the stats of how many learners passed. The observation book is good and I don't have a problem with the observation book because it guides you to know your learners that this one is good with subtraction or this one is good with what I have read in fact the SWOT [strength, weaknesses, opportunities and threats] analysis so the observation I am very happy with it. But the paperwork is too much (excerpts from Transcript of Interview with Grade 2 Teacher from School B).

Teachers also argue that they do not have all the necessary competencies to implement interventions for learners who may require special learning support, as the Grade 4 English teacher from School C explains:

> I am a teacher; I must complete intervention books for learners. I am not trained to do intervention. We had teachers who used to come here and do intervention. The department said that there's no budget. And those teachers, where are they now? We used to allocate them a class, those weaker children would go to them and those teachers knew what they were supposed to do because they were trained. After the department had said the budget this and that and now we have to sit with those learners. I am not doing justice to those learners doing

> intervention (excerpt from Transcript of Interview with Grade 4 English Teacher from School C).

The shared scope institution-in-use that 'teachers must ensure that all learners understand all the objectives of the lessons that they deliver' appears to be aspirational because at the same time teachers claim that it is unrealistic to expect all the learners to attain the intended objectives of the lesson. Teachers argue that they have learners with different abilities and who receive differing levels of support at home – many of their learners come from family, home and community contexts which do not serve as second sites of learning. As such, the principal from School C believes that teachers should endeavour to help learners navigate other spheres of their lives:

> With the calibre of kids we have nowadays, you're not going to get through to all of them. No matter how hard you try. Because of the type of learners that you have and the different backgrounds that they come from, but you do try to make an impact. If I say 'I want to affect all learners,' I will be lying because I know that it won't and then I am not being truthful. But if you can make a change in some of their lives, a small change because I remember growing up and till now I can remember certain things that we were taught at school level and I think that was what was important (excerpt from the Transcript of Interview with Principal from School C).

One of the challenges teachers repeatedly shared was the wide spectrum of parental support learners receive in their schooling, ranging from parents who check on learners' homework and help them to complete it, to parents who leave this responsibility entirely to the school. Teachers rely on parents to assist learners at home with consolidating the curriculum content delivered during the lessons at school. Teachers observe that learners whose parents assist them with their homework and help them with independent projects are more likely to perform better. Teachers believe this difference in parents' involvement in their child's schooling creates inequality among learners in their classes, as the Grade 5 natural science and technology teacher from School A explains:

> Most parents don't sit with the children and most children don't have time to sit and understand work. They [learners] just come into class, they have half an

> hour to listen to what mam says and that's it. Later on, they don't get to sit with their parents and develop that so then children end up being on different levels (excerpt from the Transcript of Interview with the Natural Science and Technology Teacher from School A).

There is consensus among teachers that most of the parents and caregivers do not provide adequate academic support to learners at home. One of the outcomes of the inadequate academic for learners at home is that schools require teachers to do the independent projects prescribed in the CAPS during school hours. This in turn reduces the amount of teaching time. The deputy principal from School C explains this policy decision:

> I told teachers at the beginning of the year [2019], we had a workshop, and we had an intervention workshop because we were finding that lots of kids were getting zeros for projects. So, I told them: 'Drop the whole thing of doing projects at home, they must do it in class. But what I find is they don't even bring the resources. We put it on D6, that is our communication to parents, with parents, we are doing a project and you remind parents from a month before and you need to bring waste material to school and you don't even ask them to buy anything, it's all scraps and they come on the day when the project is due, there are four in the group and in the group two will let the group down, so what you have to as a teacher, you have to be sharp. You have to expect that to happen and I collect milk bottles, cold drink bottles and all kinds of things at home and I bring it school so that when I am doing projects, there's an inbox there as well. I take it to my class and the kids who don't have waste resources take, and you can't sit for one hour and you can't give them zero then you give them the stuff. I just have it in your rubric: 'the learner must bring things from home.' Maybe for 4 marks and that is the only place they come down. But now you must make a way to say, they are still going to do the project and you are going to provide them with the material that they didn't bring but you have to assess the project. That is the challenge because you are spoiling them, and they are not learning responsibility but there is nothing that you can do because they don't mind if you give them zero (excerpt from the Transcript of Interview with Deputy Principal from School C).

Another outcome of the limited support parents provide learners, especially in households that face multiple deprivations, is that teachers stress their pastoral care responsibilities towards learners rather than facilitating learning. The principal from School B advises his teachers to focus on their pastoral care duties to help produce responsible citizens:

> We have learners that are from child-headed families. We need you to somehow execute your pastoral responsibilities, caring for these learners, showing them that you care, showing them that you love them so that they can then open up to listen to you. Talk to them in a tone that you both agree in class to say that when things are like this, this is how they are supposed to be … We have challenges but we must not make challenges to be problems. Let's be open so that at the end of the day we have go one goal of ensuring that this innocent souls are really taught to be responsible people in the near future (excerpt from the Transcript of Interview with Principal from School B).

Consequently, teachers appear to interpret their role of pastoral care as acting *in loco parentis* at the expense of ensuring academic performance of all learners in their classes. The Grade 1 teacher from School B explains this view:

> So, it's making a difference and also when you're a teacher you're not just a teacher but you're a lot of things. So, for me another thing is that when you're here you're exposed to kids from different backgrounds and different surroundings so for some kids I am not just their teacher, but I am their mother, that is why when (sic) you saw that welcome note [a welcome message for all learners entering the classroom]. I feel that you need to be beyond a teacher, you must be a mother; you must be a sister and a friend. You must just be what the child specifically needs at that time. You must be able to rearrange yourself and be what this child needs and what that child needs. For me it's basically that and then just to teach as well and that goes without saying. But it's making a difference and just making a change in a child's life, it might be something little but just being there and making an impression that will last forever (excerpt from the Transcript of Interview with Grade 1 Teacher from School B).

This may explain the reason for teachers articulating the shared scope institution-in-use that 'teachers must ensure that all learners understand all the objectives of the lessons that they deliver' as a self-monitoring norm and not as a rule. In other words, they are accountable only to themselves with respect to ensuring that learners understand the new curriculum content that they introduce. They may feel guilt or shame for not complying with the norm. Ostrom (2005) argues that the strength of a norm in influencing behaviour depends on how participants in an action situation perceive its value. In the three sample schools, teachers are less likely to feel guilt or shame when they cannot comply with the shared scope institution-in-use because they do not believe it is possible.

The above 12 shared institutions-in-use do not offer prescriptions for four of the seven elements that make up an action situation, namely position, information, aggregate and payoff. As discussed in chapter three, in the absence of shared institutions-in-use for elements of an action situation Ostrom (2005) proposes that an institutional analyst should use the default conditions. She proposes these on the basis of "a general legal system that presumed general freedom unless a rule specifically prohibited or mandated an act or event" (Ostrom, 2005, p. 210). The default conditions for position, aggregation, information and payoff are presented and analysed below under the subheading for each type of institution-in-use subheading. The meaning of the default conditions is obtained from analysis of the qualitative data similar to the analysis of the 12 shared institutions-in-use in the previous section.

6.3.4 Default Position Institutions-in-Use (Position)

The shared position institutions-in-use prescribe the set of positions in a lesson. The authority of the various positions is prescribed by the choice institutions-in-use which assigns actions to the positions and the aggregate institutions-in-use which assigns the control participants have over decisions at a particular point.

The default condition for position is "one position exists" (Ostrom, 2005, p. 211). This means that all participants hold the same position in an action situation and therefore their relationship is egalitarian. In a lesson there are a minimum of two positions: learner and teacher. However, this study takes a teachers' perspective, which means that teachers believe they are the only active participant in the lesson. This interpretation is

supported by the lack of actions assigned to learners in the shared choice institutions-in-use. Furthermore, the interview and observation data in chapter five show that teachers prefer learners to be passive and spend a significant amount of lesson time getting learners to sit quietly. The Grade 5 mathematics teacher from School C describes how her time is spent in a lesson, including getting learners to be quiet:

> In a day we only have half an hour periods and by the time the learners come to the class, half the period is gone so you basically have like 20 minutes to teach them. And now it's teaching, explaining and it's going to the weaker learners, it's difficult trying to manage your time and your teaching and dealing with intervention and getting them to keep quiet. You must know that we are dealing with 41 children in a class. (excerpt from the Transcript of Interview with Grade 5 Mathematics Teacher from School C).

6.3.5 Default Information Institutions-in-Use (Information)

The shared information institution-in-use prescribes the information available to participants about the structure of an action situation, the current state of variables and the history of participants interactions. They prescribe the level of information, channels of information flow among participants, assign the obligation, permission, or prohibition to communicate to participants in positions at particular decision nodes, and the language and form in which communication will take place.

The default condition for the information element is "each participant can communicate any information via any channel available to the participant" (Ostrom, 2005, p. 211). It permits sharing information with learners and there is no information that teachers are obligated, prohibited and permitted to share. Teachers seem to believe that the only information they need to share with learners is related to how they should conduct themselves in a lesson as illustrated in the quotes below:

> I lay the foundation for my rules, for my sense of discipline so yes, establishing the classroom rule, establishing the discipline, establishing where they stand and where I stand and what I'm there for (excerpt from the Transcript of Small Group Interview with Grade 3 Teachers from School A).

> I've established the ground rules from the get-go. I draw up rules for children and what is very important for me (excerpt from the Transcript of Interview with Grade 5 Natural Science and Technology Teacher from School A).

6.3.6 Default Aggregate Institutions-in-Use (Control)

The shared aggregate institutions-in-use prescribe the control element of an action situation. They prescribe the control participants have over the action-outcome linkage, whether participants can make a decision on their own at a particular node in the decision process. According to Ostrom (2005, p. 202) "aggregation rules are necessary whenever choice rules assign multiple positions partial control over the same set of action variables."

The default condition for control element of the teaching action situation is participants "act independently" (Ostrom, 2005, p. 122). This means that teachers believe they have full control over all their decisions in the lesson. In practice they are restricted by rules-in-form and learners' responses to their choice of actions. They cannot deviate from the prescribed sequence and pace of curriculum delivery and must provide reasons for preventing learners from progressing to the next grade, as the teacher from School A explains:

> I would like to be in charge of my class. I would like to start by, I would fail who I want to fail. The department mustn't tell me who I want to fail. I want to decide what the content for that term will be as long as I cover the whole syllabus by the end of the year, I want to decide what do I teach and when do I teach it but now I get told you must do number operations, this, this, so many. I don't want to do that. I want to be the captain of my ship. In my class (excerpt from the Transcript of Group Interview with Teachers from School A).

Teachers shared many stories about learners' interactions in a lesson evoking various emotions including anger, frustration, love, joy and laughter among others. However, the dominant view among teachers is that they have limited control over learners' behaviour in their lesson, which frustrates them and sometimes makes them angry to the extent of losing control of their emotions, as the Grade 7 mathematics teacher from School C explains:

> I need to control my temper. You can become very frustrated … it's a very serious job and frustration creeps in very quickly. If you were unable to control that frustration of yours, you would rather go and take a walk and get away from it all for a little while (excerpt from the Transcript of Interview with Grade 7 Mathematics Teacher from School C).

6.3.7 Default Payoff Institutions-in-use (Net Cost and Benefits)

The shared payoff institutions-in-use prescribe the net costs and benefits element of an action situation. They prescribe the external rewards or sanctions for intended outcomes. The default condition for net costs and benefits is that "any participant can retain any outcome that the participant can physically obtain and defend respectively" (Ostrom, 2005, p. 122). This suggests that teachers believe that they can attain any outcome that they can defend. This may explain the reason for teachers articulating the shared scope institution-in-use as a norm rather than a rule as strictly defined by Crawford and Ostrom (1995).

While teachers do not talk about external rewards they receive, they shared stories about feelings of love when they receive unconditional love from learners, joy when they are being appreciated by learners and pride when they see their learners' achievements. The Grade 2 teacher from School B, for example, explains that the unconditional love she is shown by learners makes teaching rewarding:

> Waking up know that I am going to change the little ones' lives. You know the love that kids give me … It's unconditional. Even if sometime you can get angry and be raise your voice but believe you me afterwards for them it wasn't a beef and they will come to you and say: "Teacher I love you" (excerpt from the Transcript of Interview with Grade 2 Teacher from School B).

The next two sections present and analyse the salient biophysical and material conditions and attributes of the community that teachers believe influence teaching in their respective contexts.

6.4 Biophysical and Material Conditions

Ostrom (2005) describes how biophysical and material conditions affect the structure of an action situation as follows:

> What actions are physically possible, what outcomes can be produced, how actions are linked to outcomes, and what is contained in the actors' information sets are affected by the world being acted upon in a situation. The same set of rules may yield entirely different types of action situations depending upon the types of events in the world being acted upon by participants. These "events" are frequently referred to by political economists as the "goods and services" being produced, consumed, and allocated in a situation as well as the technology available for these processes. Consequently, one set of rules-in-form may produce dissimilar structures of action situations in different biophysical and material conditions. (p. 22)

The goods and services being offered in a lesson are the opportunities for learners to learn the prescribed curriculum content. As such, the outcomes of a lesson at the minimum are affected by how learners learn, the technology available to facilitate learning and learners' capacity to learn (Bowles, 1970; Hanushek, 2007; Muttaqin et al., 2020). Three of the six grand tour questions that were posed to teachers asked: what makes it easy to teach (facilitating variables), what makes it difficult to teach (impeding variables) and what inspires their teaching. The responses from these questions were analysed to identify additional contextual variables that teachers believe structure teaching and their choice of actions. Teachers made no reference to learning and how to facilitate learning. Three teachers referred to learners' different cognitive capabilities and that learners may have different learning styles. However, they refer to it in relation to offering individual learners assistance rather than how it influences teaching. The Grades 5 and 7 Setswana and life skills teacher from School B, for example explains: "as we have different kinds of learners with their different learning abilities, I need to have the time to reach out to all my learners." As discussed in the subsection on shared choice institutions-in-use, teachers believe that learning occurs when lessons are fun. However, they believe this is unrealistic in overcrowded classrooms as explained by the Grade 3 teacher from School A: "So you must also try and make learning fun, even though it may be difficult because of the numbers in our class but at times we should try to include fun."

Consequently, the salient biophysical and material conditions that affect learning are the large number of learners in a class that sit close to one another. Teachers believe that it

adversely affects various dimensions of their work. In particular, large class sizes adversely affect the allocation of lesson time, provision of support to individual learners, control over classroom interactions and pace of curriculum delivery. In overcrowded classes it takes longer to prepare learners for lessons. It also intensifies the workload of teachers because it increases the number of assessments and learning tasks they must mark, interventions they must implement for underperforming learners and reports they must produce on their decisions about learner progression. Furthermore, it makes it not possible to get to know individuals' learning needs and backgrounds.

The Grade 2 teacher from School B captures how teachers in the study view the effects of overcrowded classes on the lesson and dimensions of their work:

> **Teacher:** The challenges that happen is the number of learners in the class. Another thing is obviously that there will be disruptions and there will be others that are listening and others that are rowdy, so you need to come up with a strategy of how to make them calm but it's very difficult to teach a class that is overcrowded, that is the most difficult thing. Because remember, the workload becomes too much and the marking becomes too much for you and sometimes it becomes difficult, especially with those learners that you know are struggling and also need intervention but because of the number [of learners] you find yourself behind. And again, what makes it difficult to teach is there are those learners who are not disciplined, and they will say something.
>
> **Researcher:** And they are the minority?
>
> **Teacher:** No, no it's only a few and not the majority. Just those few will come with bad attitude and disrespecting you and bullying other learners, so every two minutes you need to give attention to that learner it makes your job very difficult (excerpt from the Transcript of Interview with Grade 2 Teacher from School B).

Teachers report that it takes too long to prepare learners for a lesson in large classes. This reduces the time available to implement other parts of the lesson plan, as the intermediate phase life skills teacher from School B explains:

> Let's say maybe you have 30 minutes in the class most of the time you spend 15 minutes of your time trying to put them together, trying to make them focus,

> trying to make them quiet and all those things. So, you end up finishing your lesson without finishing your lesson plan because the thing that is important is for you to finish the lesson plan that you've prepared for the day (excerpt from the Transcript of Interview with Intermediate Phase Life Skills Teacher from School B).

There is consensus among teachers that while only a few learners disrupt their lessons as the Grade 2 teacher in School B explained above, this small group has the power to disrupt teachers' planned lessons. The principal of School C argues that to accommodate large classes learners are seated close to one another with little personal space between. This close proximity makes it easier for one learner to disrupt others around them. As a result, like the Grade 2 teacher from School B, teachers report that they need to frequently regulate learners' behaviour and focus their attention during a lesson, significantly reducing teaching time. The constant regulation of learners' behaviour in a lesson in turn also distracts the teacher, which in turn prevents them from delivering the lesson as planned, as the Grade 6 Xitsonga teacher from School B describes:

> When we are busy teaching other learners lose focus, they don't pay attention until you lose sight [of the lesson plan] by dealing with specific learners in the class (excerpt from the Transcript of Interview with Grade 6 Xitsonga Teacher from School B).

Teachers also stress that the large class sizes limit possibilities of providing individual learners with support and delivering the curriculum at the pace prescribed by the CAPS. Consequently, there appears to be a trade-off between helping each learner and maintaining the pace of curriculum delivery, as the Grade 7 economic and management sciences teacher from School C explains:

> First of all, the numbers in the classroom is very challenging; remember we are running the biggest primary school like especially with marking as you can see there is a stack that needs to be marked [pointing to the books on his table]. It's a lot of work and it's time-consuming. Challenges are basically giving everyone personal attention like you would actually love to. Because you know that in a class you get a few that are brilliant, and we get our average learners, and you

> get those who struggle as well but unfortunately we don't have the time to actually sit down and work with the ones that are struggling because you fall behind, first of all with your curriculum which is ridiculously a lot and we don't have time. We basically just push, push in order to get work done so you're not actually giving it your all whereas you know that I could have done so much better if I had more time to do a particular section. But because we have to rush, I only have so much time to do this with my large numbers, for me I think that is the biggest challenge (excerpt from the Transcript of Interview with Grade 7 Economic and Management Sciences Teacher from School C).

Reflecting on the efficacy of their lesson plans, teachers point out that their dilemma is having to make a choice between delivering the curriculum at the prescribed pace and giving attention to individual learners. Teachers choose to comply with the pace of curriculum delivery, as the head of department from School C explains:

> There is no time for revision. Curriculum is vast – you are teaching many concepts, no time and space to recollect previous work. You are chasing content without a moment of reflection. We are not reflecting on what we are doing (excerpt from the Transcript of Interview with Head of Department from School C).

The outcome of the trade-off of between delivering the curriculum content at the prescribed pace and focusing on individual learners is that individual learners' performance is compromised and can be hidden as teachers in the small group interview held in School A explain:

> Weak learners … they hide themselves [among the overcrowded classrooms] (excerpt from the Transcript of Small Group Interview in School A).

While teachers' workload is defined by the number of classes allocated to them and not by the number of learners they teach, large class sizes drastically increase their workload. As discussed earlier it intensifies their work especially that related to bureaucratic accountability measures which teachers see as paperwork and an administrative burden. Paperwork covers all forms of written work that teachers are obligated to submit and include, among others reports about curriculum coverage, forms for disciplining learners, assessments to be administered, learner performance statistics

and interventions they implement with underperforming learners. The quote below illustrates how teachers view accountability measures as paperwork:

> The forms we need to fill in for the detention, there's letters that you need to fill in. It's just a lot of admin (sic) and it takes up the time that you could use towards the child's teaching (excerpt from the Transcript of Small Group Interview with Grade 3 Teachers from School A).

6.5 Attributes of the Community

The attributes of the community that affect the structure of the action situation include the values of behaviour generally accepted in the community, the level of common understanding that participants share or do not share, the homogeneity in the preferences of those living in a community, the size and composition of the community and the extent of inequality of basic assets between the participants (Ostrom, 2005).

The salient attribute of the community that teachers believe affects teaching is the heterogeneity of learners' preferences for interactions in classroom. It makes classroom interactions unpredictable as the Grades 4 and 5 natural science and technology teacher from School B explains: "The different backgrounds that the learners come from. The different types of learners that you need to deal with every day, you say you have dealt with this one in this way but tomorrow something different happens."

There is consensus among teachers that learners' heterogeneous preferences for classroom interactions can be ascribed to their different backgrounds. The Grade 7 English teacher from School A summarises this view: "They come from different backgrounds; their behaviour is different." In other words, teachers seem to suggest that learners from such diverse backgrounds do not have shared values and norms that prescribe interactions in lessons. In the absence of shared norms of behaviour in the classroom, obtaining learners' compliance with classroom rules becomes more difficult. The Grades 4 and 5 natural science and technology teacher from School B describes this relationship between heterogeneity of learners' backgrounds and obtaining learners' compliance with classroom rules and discipline in the classroom:

> I am just saying us as a whole, collectively, discipline is a serious problem. Remember that they are coming from different backgrounds and they are

> meeting in one place, like someone is coming to show that, you know, what I can do this and I can do that and now we are working with different kinds of backgrounds and all that and sometimes it's difficult for you to come across the disciplining, and then sometimes they copy the things that are happening at home or in the streets. Whatever is happening there we are still struggling and hopefully we're going to get the best solution of how to deal with discipline but so far it's a little problem (excerpt from the Transcript of Interview with Grades 4 and 5 Natural Science and Technology Teacher from School B).

Furthermore, as discussed under the subheading shared scope institution-in-use, teachers believe that the heterogeneity of learners in relation to academic support at home and the multiple deprivations they face at home affect how they view learners' capabilities to achieve academic success.

6.6 Conclusion

The analysis of interview data reveals that teachers adopt 12 shared institutions-in-use together with the four default conditions to prescribe the actions and outcomes they are obligated, prohibited and permitted to take and attain in a lesson. These are affected by overcrowded classrooms and the heterogeneity of learners. The shared institutions-in-use, overcrowded classes and heterogeneity of learners are all exogenous variables that teachers believe influence their conduct in lesson. Put differently, teachers' conduct in a lesson is structured by a common set of exogenous variables. This set of variables creates the opportunities and constraints that teachers believe they face in a lesson that produce the teacher-centred modality dominant in South African public primary schools. The data also shows that teachers are heterogenous and that their individual beliefs also influence the form of the teacher-centred modality.

The next chapter will discuss how teachers' perception of the structure of the lesson incentivises them to use the five-part lesson routine. It also offers an explanation for the persistence of the teacher-centred modality in public primary schools in South Africa.

CHAPTER 7: DISCUSSION

The previous two chapters presented and analysed data obtained from observing 54 lessons and interviewing 47 teachers across three sample schools in the Johannesburg Central education district. The chapters applied the institutional analysis and development (IAD) framework to analyse the data. Chapter five showed that teachers have assigned limited actions to learners and themselves to regularise classroom interaction, described as the five-part lesson routine. Chapter six identified the set of salient exogenous variables that teachers believe structure lessons in their contexts. This chapter discusses how teachers' perception of the structure of lessons produces the five-part lesson routine and its persistence.

The chapter is organised into five sections. The first section discusses the five-part lesson routine that is form of the typical of the teaching modality in the sample schools. The second section discusses the set of salient exogenous variables that teachers believe structure the teaching action situation in their respective contexts. The third section shows how this structure of the lesson produces the five-part lesson routine, an intrinsically teacher-centred modality. The fourth section explains the persistence of the teacher-centred modality. The last section offers concluding remarks.

7.1 The Five-Part Lesson Routine

The five-part lesson routine divides the period into five parts that are implemented sequentially. This is similar to the five-step lesson plan[61] (Shulman, 1986) and lesson routines promoted in scripted lessons (Fleisch, 2018) and structured pedagogy

[61] The study assumes that Shulman (1986) is referring to the Herbartian lesson plan that comprises five steps, namely: preparing learning (drawing on learners' prior knowledge and experience), presenting new curriculum, associating with old ideas, generalising and applying (Kelly, 1997).

(Hoadley, 2024) that are used to control teachers' work and choice of actions in a lesson.

In the first part of the lesson teachers choose the action 'preparing learners for the lesson'. It requires learners to settle down in their seats or mats,[62] focus their attention on the teacher and wait quietly for the teacher's instructions. Teachers write down the date and topic on the chalkboard to indicate the curriculum content they will introduce in the lesson. In intermediate and senior phases and in a few lessons in foundation phase teachers instruct learners to open the textbook or Department of Basic Education (DBE) workbook on the corresponding page. The 'preparing learners for the lesson' action does not make explicit the learning outcomes learners are expected to attain in a lesson; it does however make clear the hierarchical pedagogic relation - the teacher is the authority in the class and learners must comply with their instructions quietly. The action can take five to 15 minutes of a period. While most of the learners do settle down and focus their attention on the teacher, there are learners who continue to talk to their neighbours, walk around the classroom and take longer to settle down and take out their books and stationery. As a result, teachers also choose actions to regulate learners' behaviour and focus learners' attention - to settle down and be quiet in this part of the lesson.

In the second part of the lesson teachers introduce new curriculum content or revise curriculum content. Teachers choose between three actions: 'doing a learning task together', 'reading from the textbook/ DBE workbook/assessment sheets' and 'using the chalkboard'. These actions are a form of whole-class teaching where the teacher addresses the whole class.

In the foundation phase teachers choose the action 'doing a learning task together' such as singing and counting together which generates full participation from learners to begin the day and to minimise disruptions during the transition between subjects. In the intermediate and senior phases teachers choose the action of 'doing a learning task together' for revising curriculum content including answering questions from past examination papers and correcting assigned learning tasks and formal assessments. It

[62] On mats in the front of the classroom in the case of foundation phase lessons in Schools A and B.

requires learners to listen to the teacher read the question in the learning task or assessment sheet and answer a battery of closed-ended questions that serve as guidance to answer the question.

In the action 'reading from the textbook/DBE workbook/assessment sheets' teachers offload (Leshota and Adler, 2014) the textbook/DBE workbook/assessment sheet. They read passages from the textbook, DBE workbook or assessment sheet, explain words in the passages, simplify the content and stress some key concepts and "insert" or add examples from real life, albeit superficially. The frequent use of textbooks or DBE workbooks in this study contradicts previous studies that show that teachers hardly use textbooks (Koornof, 2017; Leshota & Adler, 2014; Milligan et al., 2018). The choice of action 'reading from the textbook/DBE workbook/Assessment worksheets' observed in the study may be an outcome of the intersection of three policy processes that have made textbooks and DBE workbooks widely available in public primary classrooms. These are the curriculum and assessment policy statement's (CAPS) promotion of textbooks and DBE workbooks; DBE policy on learning and teaching support material (LTSM) that includes textbooks as a core curriculum resource (DBE, 2014) and the numerous court rulings obligating the provincial departments of education to make textbooks available as part of learners' right to education (Stein 2017). Furthermore, textbooks as core curriculum resources textbooks and DBE workbooks are closely aligned to the CAPS curriculum requirements and organised to ensure curriculum coverage, sequence and pace which makes them a logical choice and reduces teachers' lesson preparation time (Stoffles, 2005).

The action 'using the chalkboard' is often used to complement 'reading from the textbook/DBE workbook/assessment sheet'. Teachers use the chalkboard to explain what they read in the textbook or DBE workbook. They describe theoretical concepts and processes, introduce new vocabulary, stress facts, simplify complex concepts, do examples from the textbook and real life, illustrate algorithms and share misconceptions and incorrect information.

The three actions 'doing a learning task together', 'reading from the textbook/DBE workbook/assessment sheet' and 'using the chalkboard' require learners to listen to the teacher quietly and accept what the teacher says and reads as uncontested facts. They

prohibit learners from interacting with one another and with the teacher about curriculum content. These prohibitions foreclose any opportunities for learners to critically examine the curriculum content, engage in dialogue on how they understand the concepts or articulate ideas and opinions about a topic in their own words – they prohibit actions that facilitate learning (Alexander, 2015, 2018). The three actions teachers choose in the second part is similar to McNeil's (1982) "defensive teaching" where teachers fragment, mystify, omit and simplify curriculum content to gain compliance from high school learners by minimising the demands placed on them. It allows teachers to efficiently deliver the curriculum and not spend valuable teaching time negotiating with learners about what constitutes legitimate knowledge and how to assess it. The outcomes of the three actions are that the curriculum is presented as uncontested facts, teachers' authority is entrenched, classroom interactions are minimised and the curriculum is delivered at the prescribed pace. In some cases, these actions also serve to mask teachers' lack of conceptual knowledge, as argued by various researchers (Hoadley, 2012; Taylor & Vinjevold, 1999). In the Grade 7 natural science and technology lesson, the teacher from School B, who is not a subject specialist read the section on heat transfer from the textbook and shared a battery of examples from real life in the hope that learners would be able to deduce the underlying scientific process and theory. One of her examples revealed a misconception on her part of the concept of heat transfer. Offloading the textbook and not allowing learners to share their understanding of the concept may be intended to mask her lack of subject content knowledge. While the Grade 3 teacher from School C, for example, mystified the term "efficient" by telling learners to find out what it means from their parents as a way to assert her authority in a lesson where she had to constantly regulate learners' behaviour and focus their attention. [63] This prevented learners from engaging with her and keeping them occupied with coping from the chalkboard. The Grade 7 economics and management sciences teacher from School C did not allow any dialogue among learners about the causes of poverty and inequality in the lesson on poverty and inequality in South Africa. He accepted the responses of learners to a couple of closed-ended questions and moved to the action 'assigning learning task' that required learners to

[63] Efficiency is fundamental to understanding the evolution of communication technology, according to the curriculum it is the driver for innovation in communication technology.

copy the glossary from the chalkboard. This allowed him to deliver the topic in a single 35 minutes allocated to lessons and show evidence of curriculum delivery.

However, the three actions – 'doing a learning task together', 'using the chalkboard' and 'reading from the textbook/DBE workbook/assessment sheet' do not obtain all learners' compliance to listen quietly. There are learners who are fighting, harassing and bullying their neighbours, socialising with their neighbours, doing something other than listening to the teacher such as fidgeting with something or combing their hair or still looking for their books or sharpening their pencils, walking around the class. In foundation phase lessons that did not require learners to sit on the mat, they were crawling under the desks. There are also learners who help teachers with delivering new curriculum content. They report on their neighbours who were not listening, explain curriculum content to each other and share their textbooks or DBE workbooks with their neighbours.

Consequently, teachers in the second part of the lesson are constantly pausing to focus learners' attention and regulate their behaviour. These actions take up lesson time, distract teachers from delivering the curriculum content smoothly and exhaust and frustrate teachers.

The presentation of curriculum content as simple, uncontested facts is reinforced in the third part of the lesson – 'asking closed-ended questions'. Teachers ask closed-ended questions about the new curriculum content introduced that require learners to provide short answers promptly about what had been read and explained to them. Learners are obligated to raise their hands to indicate they want to volunteer an answer. Learners are not allowed to take time to think about the new curriculum content and to share their understanding of the curriculum content in their own words or ask the teacher questions about the curriculum content. In doing so, teachers reduce any spontaneity from learners that may undermine the teachers' control over the lesson. This is similar to Muller and Hoadley's (2019, p. 21) observation that "initiative and spontaneity on the part of students is foreclosed" in 'communalising pedagogy', a form of teacher-centred modality that they believe is dominant in public primary schools in South Africa.

Furthermore, teachers do not engage learners about the reasoning for their answers, they ignore incorrect answers and move to the next learner until a learner provides the

"correct answer". These practices further entrench the view that curriculum content is uncontested facts that learners must be able to recite or recall promptly. This is typified by the Grade 5 social science teacher in School B who wanted a simple answer from learners who volunteered to go outside and observe the weather and report back to the class. He required learners to answer "no rainfall" or "zero precipitation". When learners reported what they had observed, sunny weather, he did not allow them to share their reasoning; instead, he showed frustration and told them that they did not understand the question.

Teachers also use 'asking closed-ended questions' to assess whether learners can recall the curriculum content, apply it to standard problems and perform basic operations or implement algorithms, theories and processes to decide whether they should move to the next part of the lesson. The observation data seem to suggest that when teachers obtain the correct answer for a number of questions and from a number of learners they move to the next part of the lesson routine. When teachers do not get the correct answer for the questions, they explain the curriculum content again. In other words, there may be an "aspirational level" (Simon, 1955) teachers set to determine whether they attained their intended teaching outcomes.

A notable observation is that not all learners raise their hands to volunteer their answers. These learners shout out answers and guesses knowing that they will not be required to explain their reasoning. As a result, teachers regulate their behaviour by reminding them to raise their hands to volunteer answers and only share their answer on receiving permission from the teacher. There are also groups of learners who do not participate in the action and do unrelated activities which in turn provoke teachers to take the action 'focusing learners' attention'.

In the fourth part, teachers choose the action 'assigning learning task' for learners to complete quietly on their own. It obligates all learners to do the same learning task and prohibits interactions between learners. The learning tasks are generally simple and not cognitively demanding. They include copying from the chalkboard, completing a worksheet from the DBE workbooks and an exercise from the textbook that expect learners to recall curriculum content and to apply algorithms to standard types of problems introduced in part two of the lesson. In Grade R it includes producing an

artefact. Assigning simple learning task reinforces the notion of curriculum content as uncontested facts. Assigning the same cognitively simple learning tasks for all learners to complete quietly on their own allows teachers to monitor and control classroom interactions easily. It reduces the chances of learners behaving in unpredictable ways (Shavelson & Stern, 1981). Assigning cognitively demanding tasks requires more effort from teachers to guide all learners through the learning task such as breaking it up into smaller tasks and encouraging genuine dialogue between the teacher and learners about the learning task (Brophy, 1986; Brophy & Alleman, 1991; Doyle, 1977, 1980, 1983, 1984, 2006; Elmore, 2008; Tekkumru-Kisa et al., 2020). In this study teachers struggle to keep learners' attention and seem to fear that they will not be able to control classroom interactions that require genuine dialogue.

The action 'assigning learning task' is the only time in a lesson that a few teachers use codeswitching to explain words in the learning task and what the learning task is expecting learners to do. It is also the only part in the lesson where learners are allowed to ask questions, albeit procedural questions about completing the learning tasks. While teachers explain how learners should complete the learning task, they do not make the evaluative criteria explicit to learners, as observed by Hoadley (2006). Learners are not made aware of how to assess whether they attained the intended learning outcomes or what is considered legitimate knowledge (Bernstein, 2004). It is also another way for teachers to assert their authority and not to allow learners any opportunity for contestation.

In the last part of the lesson teachers choose the actions 'monitoring completion of the learning task', 'accepting uneven quantities of work' and 'marking learners' exercise books'. In the action 'monitoring completion of the learning task', teachers monitor whether learners are deviating from completing the learning task quietly on their own and whether most of the learners are able to complete it.

Similar to the earlier four parts of the lesson routine, in this part not all learners are working quietly on their own. Some learners share their understanding with their neighbours, work with their neighbours to complete the learning task, share their stationery with other learners and tell on learners who are not completing the learning tasks. This is similar to Sieber's (1979) argument that learners do lend support to

teachers' goals. However, learners also lose focus and fight, bully and harass one another and steal stationery from each other. Teachers take the actions 'focusing learners' attention' and 'regulating learners' behaviour' to obtain learners' compliance.

In the action 'accepting uneven quantities of work' teachers appear to accept that many learners in the class will complete the assigned learning task, some learners will partially complete it and a few learners will do very little of the learning task. This action suggests that teachers seem to be satisfied when most learners are able to complete the assigned learning task. This appears to be their aspirational level for lessons (Simon, 1955). It confirms the argument emerging from various studies that beginner teachers learn to accept that not all learners will understand the content and find the lesson interesting (Le Maistre & Pare, 2010; Lindqvist et al., 2023).

In the action 'marking learners' exercise books' teachers' feedback is generally limited to commenting on the completion of learning tasks and the number of correct answers or what Alexander (2005) refers to as "phatic praise". Teachers generally do not offer learners meaningful feedback on the quality of their products that will help them to reflect on their understanding of curriculum content.

The five-part lesson routine is an institution. It assigns actions to both teachers and learners to create a regularised pattern of classroom interactions in a lesson. Berger and Luckmann (1966, p. 72) stress that institutions arise because of "the reciprocity of institutional typifications and the typicality of not only the actions but also the actors in institutions". In education research, Alexander (2005) refers to it as a "typificatory" lesson routine that Bernstein (2003, p. 57) argues creates the "condition for appropriate conduct in the pedagogic relation". In the five-part action sequence lesson routine learners are required to behave as a 'typical learner' – to listen to the teacher, provide short answers promptly, read, sing and count in chorus, copy from the chalkboard and textbook or DBE workbook quietly, answer questions from the LTSM in their exercise books quietly and produce artefacts in Grade R quietly. The teacher is required behave as a 'typical teacher'– to control learners' behaviour in a lesson, introduce new curriculum content, assign learning tasks and monitor learners' completion of learning tasks.

The assigned actions do not mean that the teacher is "treating the class as a homogeneous whole" (Hoadley, 2018, p. 192). Rather, it underscores that teachers recognise the heterogeneity of learners and assign them limited actions as a way to control a large group of learners. Analogously, the actions assigned to teachers in the five-part lesson routine promotes the types of actions teachers should take in a lesson, or what Haberman (1991, p. 291) calls "the basic menu of urban teacher functions." In doing so, it also allows a teacher to ceremonially show that they are enacting their roles and responsibilities even when there is no learning taking place. The Grade 5 natural science and technology teacher from School C, for example, followed parts of the lesson routine – preparing learners for the lesson by gathering them from the playground into the class, assigning a learning task to copy the food pyramid from the textbook and walking around the classroom. In doing so, he ensured that learners were safe in the classroom and there was evidence in learners' exercise books of curriculum delivery at the required pace, or what Haberman (1991) refers to as doing the "basic" acts of teaching.

Furthermore, the five-part lesson routine offers teachers a means to maintain 'activity flow' (Clark and Peterson, 1984; Fang, 1996; Shavelson and Stern, 1981) and prevent distraction by learners. The Grade 5 social science teacher from School B for example maintained activity flow by immediately assigning learners a learning task to complete on their own quietly when a learner passed wind aloud during whole-class teaching (second part of the lesson routine) which triggered learners around him to laugh out loud. The action 'assigning learning tasks' for learners to complete on their own' shifted the focus away from the potential disruption to the learning task.

In summary, the five-part lesson routine is characterised by an hierarchical pedagogic relation, the curriculum is presented as uncontested facts, there is very limited interaction between learners and learners and the teacher about the curriculum content and evidence of curriculum delivery rather than attainment of learning outcomes. As such, it is a teacher-centred modality that appears to focus on achieving teachers' goals, namely, to control classroom interactions, deliver the curriculum at the prescribed pace and show evidence thereof, and control a large group of learners with heterogeneous preferences for classroom interactions. The five-part lesson routine is a teaching modality which, using Carnoy et al. (2012, p. 158) words, can be seen as "serving

teachers" instead of "making students academically competent." The routinising of lessons (Shavelson and Stern, 1981) through the five-part action-sequence allows teachers to "define the task to derive satisfactory solutions to the new demands" (Weatherley & Lipsky, 1977, p. 194).

The five-part lesson routine is what Bernstein (2003, p.163) refers to as a single pedagogic discourse with "one embedded discourse producing one embedded inseparable text." In other words, it "embeds competence in order and order in competence" (ibid, p. 160). As such, the actions that characterise the five-part lesson routine create order by limiting interactions between learners, learners and the teacher and learners and LTSM about curriculum content, that in turn produce the curriculum as uncontested facts and the assignment of cognitively simple learning tasks. It does not allow for learners to meaningfully explore curriculum content and facilitate learning.

Crawford and Ostrom (1995, p. 583) posit that "to understand regularized patterns of interaction affected by rules, one needs to examine the actions and outcomes that rules allow, require, or forbid and the mechanisms that exist to enforce those rules." In the next section the rules and norms or shared institutions-in-use and the contextual variables that affect them that teachers believe structure the teaching action situation is discussed.

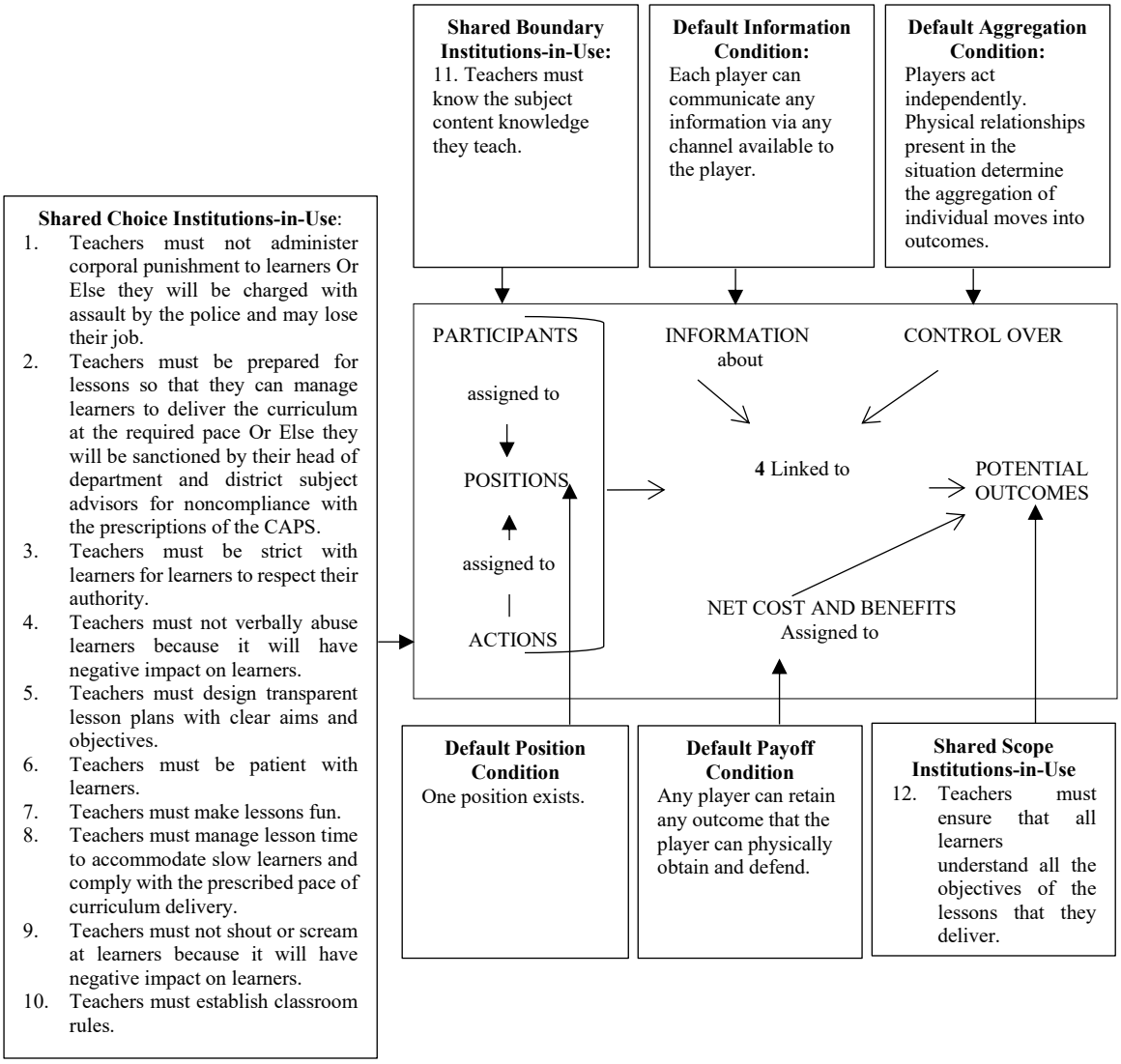
7.2 Teachers' Perception of the Structure of the Teaching Action Situation

The set of shared exogenous variables that teachers believe affect teaching in their contexts are 12 shared institutions-in-use that regulate their behaviour in the lesson, the heterogeneity of learners and overcrowded classes. The 12 shared institutions-in-use include both norms and rules as strictly defined by the institutional grammar tool (IGT) (Crawford & Ostrom, 1995). The study did not explore the origins of the norms and rules that teachers listed.

The 12 shared institutions-in-use prescribe three elements of the lesson (the action situation in the IAD framework), namely participants, actions and outcomes. Teachers did not list shared institutions-in-use for position, information, control and net costs and benefits elements that structure a lesson. Ostrom (2005) suggests that in the absence of shared institutions-in-use that prescribe an element, institutional analysts should use the

default conditions which are based on a general legal system that presumes general freedom. Put differently, in this study it means that teachers believe that they have complete freedom over positions, information, control and net cost and benefits of actions. Figure 4 below shows how the 12 shared institutions-in-use together with the four default conditions directly affect structure of a lesson. It prescribes the actions teachers are obligated, prohibited and permitted to take which creates the opportunities and constraints teachers believe that they face in a lesson. In doing so, the shared institutions-in-use and the default conditions indirectly influence teachers' choice of actions in a lesson by creating the set of allowable actions and outcomes that teachers can choose from.

Figure 6: Shared institutions-in-use and default conditions that prescribe elements of the lesson.[64]



Ten of the 12 shared institutions-in-use teachers adopt prescribe the actions teachers are obligated, prohibited and permitted in a lesson, as illustrated in Figure 5. The large portion of shared choice institutions-in-use that teachers adopt to regulate their conduct in a lesson suggest that teachers' primary concerns in a lesson are about how they relate to learners and deliver the curriculum. Six of these shared choice institutions-in-use prescribe how they should relate to learners and the remaining four prescribe the actions they are allowed to deliver the curriculum. This suggests that teachers believe that interacting with learners is more complex and requires more shared institutions-in-use to regulate the relationship.

[64] Adapted from Ostrom (2005, p. 33).

The six shared choice institutions-in-use that regulate teachers' relationship with learners in a lesson are: 'teachers must not administer corporal punishment to learners Or Else they will be charged with assault by the police and may lose their job'; 'teachers must not verbally abuse learners because it will have negative impact on learners'; 'teachers must not shout or scream at learners because it will have negative impact on learners'; 'teachers must be strict with learners for learners to respect their authority'; 'teachers must be patient with learners' and 'teachers must establish classroom rules'. They prohibit teachers administering corporal punishment or verbally abusing and shouting and screaming at learners. They also obligate teachers to be strict and patient with learners and establish classroom rules. Together they create the set of allowable actions to regulate teachers' interactions with learners. This set includes actions that allow teachers to maintain an emotional distance from learners, keep calm, formulate classroom rules that are aligned to their preferred classroom etiquette and control and sanction learners without administering corporal punishment, abusing learners verbally or shouting and screaming. Hargreaves (2001) argues that how teachers view learners affects the emotional distance and closeness in their relationship and Sabarwal et al. (2022) show that teachers have fixed mindsets on the learning potential of disadvantaged learners. In this study teachers report that learners have heterogeneous preferences for classroom interactions (see below). They attribute learners' heterogeneous preferences for classroom interactions, including antisocial behaviour to their diverse socioeconomic backgrounds and the various levels of deprivation they face in their households.[65] This stereotyping of learners permits teachers to rationalise that they are solely responsible for the institutional arrangements in the classroom, such as the institution-in-use: 'teachers must establish classroom rules'. Classroom rules will instil their preferred classroom etiquette and will allow them control over their own emotions. Like Lortie's (1967) teachers who "feigned ferocity" to keep their emotional distance from learners, teachers in this study promote adopting a "strict" demeanour in the belief that it will incentivise learners to comply with classroom rules and disincentivise them from taking actions that teachers disapprove of and in the process provoke their anger. It also limits their interactions with learners as captured by the

[65] Antisocial behaviour includes such as fighting, bullying, sexually harassing and stealing from each other.

teacher from the Segalo and Rambuda's (2018, p. 4) study that chose "a rigid teacher-centred approach as I do not want to interfere with the lives of learners I teach."

Three of the four shared choice institutions-in-use that teachers adopt to prescribe the actions they are obligated, prohibited and permitted to take to deliver the curriculum are that 'teachers must be prepared for lessons so that they can manage learners to deliver the curriculum at the required pace Or Else they will be sanctioned by their head of department and district subject advisors for noncompliance with the prescriptions of the CAPS, 'teachers must design transparent lesson plans with clear aims and objectives' and 'teachers must manage lesson time to accommodate slow learners and comply with the prescribed pace of curriculum delivery'. They obligate teachers to be prepared, control classroom interactions, deliver the curriculum in the sequence and at the pace prescribed by the CAPS, formulate lesson plans and manage the lesson time to accommodate "slow learners."[66] Together they create the allowable set of actions for teacher to choose from to deliver the curriculum. The set includes actions to design lessons that will enable teachers to keep order, deliver the curriculum in the sequence and at the pace prescribed by the CAPS, accommodate slow learners and manage their time. The set of allowable actions enables teachers to comply with the action-sequence lesson routine promoted by the Foundations of Learning campaign that has become the standard and supported by local academics (Fleisch, 2018) and international development organisations (Schweisfurth, 2023). They require teachers to stipulate the actions they intend to take in the lesson and allocate time for each action. The allowable action set includes the action of introducing new curriculum content to facilitate delivery of curriculum at the prescribed pace and assigning learners task to ensure learners spend "time-on-task" (Cilliers et al., 2018; Fleisch, 2018; Fleisch & Dixon, 2019; Hoadley, 2024; Puttick, 2017; Reeves, 2005; Scheerens, 2000). The Gauteng Department of Education (GDE) provides lesson plans to assist teachers deliver the CAPS. Consequently, teachers do not use the rational approach (Clark and Yinger, 1979) to planning, starting with formulating the objectives of the lesson, followed by choosing learning tasks that will facilitate the attainment of the objectives, and finally,

[66] The term 'slow learner' is used to describe a learner who easily loses concentration in a lesson, acquire new curriculum content at a slower pace than the prescribed pace and takes too long to complete the assigned learning tasks in the allocated time in a lesson.

evaluating the outcomes of the lesson. Instead, teachers are incentivised to mimic GDE lessons plans to comply with policy prescription. This produces a standardisation of practices or isomorphism is practice (Meyer & Rowan, 1977; Puttick, 2017). In this study, it is the action-sequence lesson format promoted by the Foundations of Learning campaign.

The set of allowable actions resonates with findings of studies on teacher decision-making during interactive teaching that show teachers' primary goals in the lesson are to maintain order, deliver the curriculum efficiently, and "activity flow" (Doyle, 1977, 1980, 1983, 1984, 2006; Borko et al., 1990; Brophy, 1986; Brophy & Alleman, 1991; McNeil, 1982; Clark & Peterson, 1984; Talbert & McLaughlin, 1992; Elmore, 2008; Shavelson & Stern, 1981; Tekkumru-Kisa et al., 2020).

Teachers adopt one shared choice institution-in-use to prescribe how they teach, namely 'teachers must make lessons fun'. Teachers refer to fun lessons as those in which learners are allowed to interact with one another and LTSM to complete learning tasks. The obligation to make lessons fun creates a set of allowable actions that include selecting learning tasks that encourage learners to interact with one another and LTSM.

The 'teachers must make lessons fun' is the only shared choice institution-in-use that prescribes how teachers should teach. However, it is difficult to determine whether this institutional statement is linked to actions that promote learning because during the interviews or teacher talk there were no references made to the theories of learning and pedagogy that influence their choice of actions in a lesson.

Teachers adopt one shared scope institution-in-use that prescribe the outcomes they intend to achieve: 'teachers must ensure that all learners understand all the objectives of the lessons that they deliver'. The single shared scope institution-in-use obligates teachers to assess whether each learner understands the objectives of a lesson. The 10 shared choice institutions-in-use that prescribe teachers actions in a lesson indicate that teachers' objectives in a lesson are to control classroom interactions and deliver curriculum content in accordance with the prescriptions of the CAPS. As such, the shared scope institution-in-use creates the set of allowable outcomes that include whether learners are able to recall curriculum content and comply with classroom rules.

The default condition for the position element of a lesson is ‘one position exists’ which according to Ostrom (2005) means that the action situation is internally egalitarian where all participants hold the same position. There are no shared choice rules that assign actions to learners. The default condition for position in this study implies that teachers believe there is only one active participant in the lesson – the teacher. As such, it creates a set of allowable actions that assert teachers’ authority.

The default condition for the information element of a lesson is ‘each player can communicate any information via any channel available to the player’. It permits teachers total control over information flow in the classroom. It creates a set of allowable actions that includes actions to share all information using any means and not to share information.

The default condition for the aggregation element of a lesson is ‘players act independently. Physical relationships present in the situation determine the aggregation of individual moves into outcomes’. It permits teachers to make decisions independently of learners during a lesson. It creates a set of allowable actions that includes all actions that teachers can take.

The default condition for the payoff element of a lesson is ‘any player can retain any outcome that the player can physically obtain and defend’. It permits teachers to attain any outcome that they can defend. It creates a set of allowable outcomes that includes all outcomes that teachers can obtain and defend. In the interviews teachers talked about “making a difference in learners’ lives” without being explicit about what kind of impact they intend to make. This creates the opportunity for teachers to choose any outcomes that they believe will make a difference to learners’ lives.

The structure of the teaching action situation is also affected by how teachers view the attributes of the community and biophysical and material conditions.

Teachers believe the heterogeneity of learners is the salient variable in the “attributes of the community” category of exogenous variables in the IAD framework that influence teaching. Teachers believe that learners are heterogeneous in various dimensions including socioeconomic, cultural, communities they live in that are affected by various degrees of violence and instability, pace of learning, home languages and levels of

proficiency in English (the language of learning and teaching (LoLT)) and academic support from their parents. They consider the high degree of heterogeneity of learners in their classes as a constraint on the allowable actions and outcomes in a lesson. Teachers report that they struggle with this heterogeneity of learners and are incentivised to simplify the curriculum. Teaching at the right level is promoted by international organisations as a means to overcome this challenge in developing countries (Angrist & Meager, 2023).

However, the study did not explore teachers' beliefs about learners' capabilities. The study by Sabarwal et al.'s (2022) shows that teachers from nine developing countries believe that there is very little they can do to help learners if their parents are uneducated. Hwa (2023) suggests that teachers' norms are influenced by individual and collective norms. This study underscores that teaching is influenced by shared exogenous variables. Concomitantly, the study shows that teachers are heterogeneous in their preferences for classroom interactions which may be a result of the interplay between individual beliefs (Hwa, 2023) and exogenous variables. Teachers in the study do not seem to see the heterogeneity of learners in their classes as opportunities for creating alternative institutional arrangements such as peer learning, creating circles of support and allowing learners to critically reflect on social issues facing them, among others. The set of allowable actions the heterogeneity of learners creates are actions to accommodate 'slow' learners.

Teachers believe the salient variable in the "biophysical and material conditions" category of exogenous variables in the IAD framework is overcrowded classes. Large numbers of learners in the class lead to a significant increase in teachers' workload and effort, such as controlling classroom interactions, getting to know individual learners learning needs, marking assessments, providing academic support and grading learners. Teachers believe that overcrowded classes place significant constraints on the allowable actions and outcomes in a lesson. Consequently, the set of allowable actions and outcomes includes actions and outcomes that do not consider individual learners' needs. Put differently, teachers' allowable actions and outcomes are those for a "typical learner in their grade."

According to the IAD framework, the exogenous variables act in configuration rather than in an additive manner to create the opportunities and constraints that teachers believe they face in a lesson. Consequently, the actions and outcomes that specific shared institutions-in-use and default conditions prescribe for an element of a lesson are affected by the other shared institutions-in-use and default conditions, the heterogeneity of learners and overcrowded classes. These in turn affect the total allowable actions and outcomes that teachers believe that they can choose from in a lesson.

The next section discusses how the set of allowable actions and outcomes teachers can choose from for a lesson and the classroom interactions these actions generate produce the five-part lesson routine.

7.3 The Set of Allowable Actions and Outcomes that Produces the Five-Part Lesson Routine

The default condition that one position exists incentivises teachers to believe that the lesson is a social space where they are the only active participant and have authority over the class. This belief, together with the default conditions for information, aggregate and payoff, gives them complete autonomy over their choice of actions in the lesson. They can choose what information they want to share with learners and how they want to share it, as well as make decisions about what to teach, when to teach, how to teach, how to relate to learners and what outcomes they intend to attain and defend. They are not required to consult with learners or colleagues about these decisions. This view of a lesson may be a result of what Weick (1976) refers to as "loosely coupled organization" (Weick, 1976, 1982). While modern schooling is based on the rational bureaucratic organisational form that emerged with industrialisation (Tyack and Tobin, 1994), Weick (1982) argues that schools are not typical rational bureaucratic organisations. Weick (1982, p. 673) contends that schools have "little control over the supply; they have no firm standards by which to judge the impact of their work and no clear theory of causation that specifies the effects of the things they do". As such, there is no regular oversight and evaluation of teachers' work and teachers seldom meet collectively to give feedback on one another's work.

This view of complete authority incentivises teachers to choose the hierarchical pedagogic relation where they can assert their authority. Consequently, they are

incentivised to choose the action "preparing learners for the lesson" to begin the lesson. This action prepares learners for their role in a lesson, which is to be quietly attentive to the teachers' instructions; passive, in other words. It does not make explicit the learning outcomes that they should attain, and it does not prepare them for learning.

However, starting in the 1990's, the large-scale interventions attempt to tighten control over teachers' work (Hargreaves, 2009; Hautala et al., 2018). This included South Africa, especially the CAPS. Consequently, teachers' choice of what they teach and when they teach it is constrained by the prescriptions of the CAPS and how it is monitored. What teachers teach, when they teach it and the learning tasks they assign to learners are closely monitored by their heads of departments and district subject advisors. How teachers organise the lesson is also constrained by the lesson plans provided by the GDE that promote an action-sequence lesson routine as the preferred standard for lessons. The sanctions for noncompliance with the CAPS and GDE regulations are harsh – teachers may face dismissal. These constraints reduce their set of allowable actions to deliver the curriculum and autonomy in a lesson. Coburn (2004) argues that schools are not decoupled organisations and that teachers do respond to changes in policy and legislation because they obligate teachers to comply. She introduces the term "bounded autonomy" to refer to how policies and legislation reduce teachers' autonomy, and in doing so reduce teachers' set of allowable actions as a means to change teaching practices. As a result, Hautala et al. (2018) argue that some elements of teaching are loosely coupled and others are more tightly coupled. In this study, teachers adopt three shared choice institutions-in-use to deliver the curriculum that will enable them to comply with the rules-in-form.

Furthermore, learners in a lesson are not passive participants who dutifully and quietly comply with teachers' actions and associated instructions. Learners are active and noisy and help each other and the teacher as well as distract one another and the teacher. Classrooms are not static environments but "alive and moving" (Doyle, 1980, p. 7) and unpredictable. In the context of the sample schools that are overcrowded with learners who are heterogeneous on multiple dimensions, including diverse preferences for classroom interactions pose an elevated risk for instability during lessons. Teachers need to take actions that will control classroom interactions and create order and stability in a lesson for them to deliver the curriculum content. However, teachers'

choice of actions to control classroom interactions is constrained by rules-in-form that prohibit the use of corporal punishment and other sanctions that may compromise learners' right to education. An inadvertent outcome of these rules-in-form is that teachers believe they are not allowed to sanction learners. Consequently, teachers adopt six shared choice institutions-in-use to regulate how they interact with learners and control classroom interactions that allow them to comply with the latter rules-in-form. These shared choice institutions-in-use regulate only teachers' behaviour in a lesson because they believe they are the only active participant in a lesson and need to assert their authority. However, as McNeil's (1982) study show and Haberman (1991) contends, it is learners who are really in charge of the lesson. Consequently, the six shared institutions-in-use that teachers adopt help them to control their emotions and not allow learners to have power over their actions. It is noteworthy that teachers do not provide opportunities for learners to take responsibility for classroom interactions.

The three shared choice institutions-in-use that prescribe the actions teachers can take to deliver the curriculum, together with the six shared choice institutions-in-use that prescribe how teachers relate to learners, act in configuration to create the set of allowable actions that allows teachers to comply with rules-in-form and control classroom interactions. This set, as discussed in chapter five, comprises 17 actions to deliver the curriculum and nine actions to regulate their behaviour. However, teachers frequently choose seven actions to deliver the curriculum and three actions to control classroom interactions.[6768] The seven actions to deliver the curriculum are categorised as direct instructions (Rosenshine, 1978) or whole-class teaching (Alexander, 2005, 2008; Papandreou & Yiallouros, 2020). They allow teachers to comply with prescriptions of the CAPS and GDE and are at the level of the "slow learners". The three actions to regulate classroom interactions require learners to comply with the teachers' preferred classroom etiquette which is to be quiet and comply with teachers' instructions. These actions assign learners a limited set of actions, namely, to listen, provide short answers promptly, complete cognitively simple learning tasks quietly on

[67] The three actions are: 'focusing learners' attention', 'preparing learners for the lesson', 'regulating learners' behaviour' and 'affirming learners' good behaviour'.

[68] The seven actions are: 'doing a learning task together', 'using the chalkboard', 'reading from textbooks/DBE workbooks/assessment sheets', 'asking closed-ended questions', 'assigning learning task', 'explaining written questions' and 'monitoring completion of the learning task'.

their own and comply with teachers' preferred classroom etiquette (to be quietly attentive and comply with teachers' instructions). They do not allow for genuine interactions between learners or between learners and the teacher about curriculum content. Learners are not offered opportunities to share their understanding of curriculum content, their opinions about curriculum content, critically examine the curriculum content or question the teacher about curriculum content. These limited classroom interactions result in the curriculum content being presented as uncontested concepts in the textbooks and DBE workbooks – lists of facts, scientific laws and mathematical algorithms.

Simultaneously, teachers are aware that learning is an active process that requires learners to interact with one another and LTSM. This is like Cuban's (2020) notion of incremental change. They adopt the shared choice institution-in-use 'teachers must make lessons fun'. Teachers include learning tasks that require learners to be active in their repertoire of actions to deliver the curriculum. However, these learning tasks are not part of teachers' routine – they are treated as special lessons.

The action 'preparing learners for the lesson', together with the actions that teachers, frequently choose to deliver the curriculum and control classroom interactions, produces the five-part lesson routine that is the form of the typical of the teaching modality in the three sample schools.

The five-part lesson routine allows teachers to comply with the prescriptions of the CAPS, meet bureaucratic accountability measures, cope with the heterogeneity of learners in the classes and control classroom interactions in overcrowded classes. It enables teachers to achieve their outcomes, which in this study is limited to complying with curriculum prescriptions and controlling classroom interactions. Put differently, the five-part lesson routine is an intrinsically teaching-centred modality rather than a learning-centred modality. Furthermore, it shows that teachers in the study view teaching as delivering curriculum content and maintaining order and stability in a lesson.

The shared scope institution-in-use that teachers adopt that prescribes that 'teachers must ensure that all learners understand all the objectives of the lessons that they deliver' entrenches the five-part lesson routine as a teaching-centred modality. The

shared scope institution-in-use creates a set of nine allowable actions to assess whether learners understand the objectives of the lesson. However, teachers frequently choose the actions 'accepting uneven quantities of work', 'correcting learning task products' and 'marking learners' exercise books'. These actions allow teachers to stream learners, revise curriculum content and assess whether learners have completed the assigned learning task.[69] These actions do not offer learners substantive feedback on their performance. In doing so, teachers do not focus on individual learners' performance, what Muller and Hoadley (2019, p. 111) describe as a characteristic of communalising pedagogy: "there is little explicit marking out of individual performances."

Furthermore, the shared scope institution-in-use is articulated as a norm when strictly applying the IGT (Crawford and Ostrom, 1995). In other words, there are no material sanctions for noncompliance. Teachers self-monitor and are accountable to themselves for achieving the outcome, and may feel pride for achieving it or guilt for not achieving it. In the context where teachers and school managers believe it is unrealistic to expect all learners to understand the curriculum content, teachers are less likely to feel guilt for not attaining the outcome. This perception of the outcomes of teaching is supported by the default condition for payoff (any player can retain any outcome that the player can physically obtain and defend). They allow teachers to accept that there are learners who are able to complete the learning tasks, learners who are able to partially complete the learning tasks and those who cannot complete the learning tasks (informally stream learners). This is similar to studies that show that teachers use satisficing decision-making process (Le Maistre & Pare, 2010; Lindqvist et al., 2023). Put differently, teachers accept satisfactory rather than optimal outcomes. They defend the satisfactory outcomes by arguing that learners in their class are heterogeneous in relation to their capabilities to understand curriculum content at the prescribed pace. Teachers in the study also argue that it is satisfactory if they help learners in other ways such as offering learners pastoral care, especially for learners who face multiple deprivations in their homes and the trauma of poverty and violence in their communities. Consequently, teachers feel pride that they are able to contribute to other aspects of learners' well-being. They rationalise this trade-off by invoking the mantra of "making a difference in

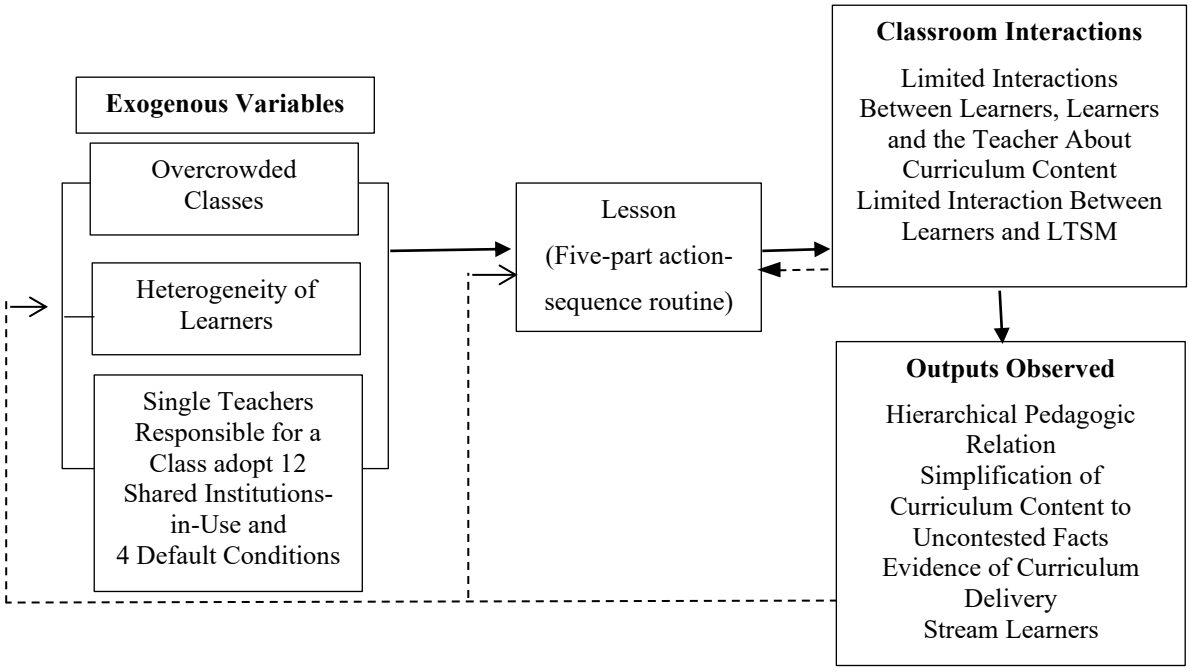
[69] Streaming learners is a practice that groups learners according to their academic performance.

learners' lives" – an unquantifiable outcome of their work. The action 'accepting uneven quantities of work' produces the practice of streaming learners. They unofficially or mentally group learners into those that will complete the learning task, partially complete it and may not be able to do it.

While this study did not explore the outcomes of the teaching action situation, five outputs were observed. The actions teachers frequently choose generate limited classroom interactions to produce an hierarchical pedagogic relation as a means to maintain control and stability in the classroom, simplify the curriculum to accommodate slow learners and comply with the sequence and pace prescribed by the CAPS, show evidence of curriculum delivery to meet bureaucratic accountability measures, socialise learners into passive roles to cope with overcrowded classes with heterogeneous preferences for classroom interactions and stream learners into fast and slow learners. Consequently, learners' performance in a lesson is assessed by how well they can recall curriculum content, apply scientific laws and algorithms to standard-type problems, complete assigned learning tasks and comply with the teacher's preferred classroom etiquette.

Figure 7 below summarises the discussion using the IAD framework. It shows the 12 shared institutions-in-use that teachers adopt and default conditions to regulate their behaviour to comply with rules-in-form and control classroom interactions in the context of overcrowded classes with learners who are also heterogeneous in various dimensions. The set of exogenous variables structure a lesson that creates a small set of allowable actions that routinise the lesson. The five-part lesson routine generates limited classroom interactions about curriculum content. These interactions produce the hierarchical pedagogic relation, curriculum as uncontested facts, evidence of curriculum delivery and streaming learners.

Figure 7: The findings are summarised using the IAD framework.[70]



The next section explains the persistence of the teacher-centred modality.

7.4 Explanation for the Persistence of the Teacher-Centred Modality

The application of the IAD framework in this study shows that the teacher-centred modality is an institution that is an outcome of the "grammar of schooling" (Tyack and Tobin, 1994) in the context of overcrowded learners who are heterogeneous in numerous indicators. This modern organisational form of schooling based on industrial production processes allocates a single teacher to teach a group of heterogeneous learners in an isolated classroom and holds them accountable for delivering a standard curriculum and maintaining order in the class. The criteria for monitoring and evaluating teachers' work are externally determined by how society views what good teaching is (Meyer and Rowan, 1977) or what actions constitutes basic teaching (Haberman, 1991; Schweisfurth, 2023). These are often in the form of narrowly defined indicators that individual teachers must comply with and are implemented using the command-and-control approach intrinsic to the rational bureaucratic organisational form of modern schooling. These indicators are often not based on clear theories of change or how teaching affect learning (action-outcome linkages). Teachers are fundamentally left

[70] Adapted from Ostrom (2005, p.15).

on their own to implement whatever new prescriptions policymakers believe will improve learners' measured performance. This inadvertently results in lessons or teaching being loosely coupled (Weick, 1976, 1982; Hautala et al., 2018) with the school management and other layers of management such as education districts. This incentivises teachers to believe that they have complete autonomy in a lesson, that the classroom is their social domain.

However, their choice of actions or autonomy is constrained by contextual variables. The previous sections showed that teachers believe that exogenous variables influence their lesson, namely a tightly prescribed curriculum that is monitored using narrowly monitored legislation, regulations and codes governing how they relate to learners, overcrowded classes and heterogeneous learners in a class. These hold only the teacher accountable for complying with the prescriptions of a national curriculum statement and their conduct which entrenches the belief that they are solely responsible for making decisions in a lesson. This view of a lone teacher in charge of everything that happens in a lesson is further entrenched by being entirely responsible for a group of learners who are heterogeneous in various indicators. They are solely responsible for ensuring order and stability in a dynamic and unpredictable environment.

The application of the IAD framework in this study shows that teachers in the three sample schools adopt shared rules and norms that allow them to comply with various rules-in-form governing lessons and control large class sizes with heterogeneous learners. It reveals that they have control over how they conduct themselves, how they present the curriculum and how they define the outcomes of a lesson. Teachers adopt norms and rules or shared institutions-in-use that incentivise them to control their emotions and assert their authority, comply with the prescriptions of the CAPS bureaucratically and defend vague outcomes of teaching. They reduce the complexity of teaching to create a small set of allowable actions and indeterminate outcomes. This small set of actions and outcomes produces a lesson routine that establishes an hierarchical pedagogic relation, instils their preferred classroom etiquette, presents the curriculum as uncontested facts and streams learners. These outcomes do not include dialogue about curriculum content and learning.

As Ostrom (200, p. 18) argues, “one cannot improve outcomes without knowing how the structure is itself produced.” This study shows that the “grammar of schooling” produces the teacher-centred modality. Unless the “grammar of schooling” changes, teachers will continue to be incentivised to use the teacher-centred modality.

In the South African case where the rules-in-form prescribing what and when teachers teach promote an action-sequence lesson routine and the use of textbooks and DBE workbooks, the teacher-centred modality takes the form of the five-part lesson routine. Additionally, where learners in poor schools come from communities in which violence and poverty are rife and households face multiple levels of deprivation, teachers are more likely to unofficially stream learners and simplify the curriculum.

Educational researchers suggest that there are shared values and practices and ingrained culture that structure teaching in public primary schools located in poor communities that produce an inefficient teaching modality (Carnoy et al., 2012; Muller & Hoadley, 2019). This study by applying the IAD framework to teaching, provides researchers with a framework to explore structural variables and practices that the latter researchers allude to. It shows that the five-part lesson routine, a form of the teacher-centred modality is a product of shared views about the opportunities and constrains teachers face in a lesson.

The study also shows how the five-part lesson routine is not learning-centred (Garnett, 2011). It does not allow for genuine interaction about curriculum content and for learners to share their understanding of curriculum content that will facilitate learning.

7.5 Operationalising the IAD Framework

Applying the IAD framework to explore the structure of teaching proved to be both simple and difficult. It was extremely useful in designing the study. The naturalistic data required by the framework to explore teachers’ choice of actions in a lesson and the contextual variables helped with selecting the research paradigm, methodology, sample frame and data gathering techniques.

The 54 lesson observations and 47 interviews with teachers collected a huge quantity of data in the form of text or transcripts of lessons and interviews in MS word. The IAD

framework does not offer a language to describe the actions in specific settings. As such, the study had to draw on the literature on teaching modalities to analyse the actions that teachers took in a lesson and to stress-test the categories of actions that emerged. This process showed that when exploring a phenomenon, it may be necessary to complement the IAD framework with a theory that can assist to describe the observed actions in meaningful ways and to be able to contribute to the discourses of the action situation understudy. This study did not apply a specific theory of pedagogy; it used the lexicon in the literature that describe the various actions teachers take in a lesson such as asking closed-ended question. Concomitantly, the IAD framework provided the freedom to create new categories of actions that were not considered part of teaching in the literature. For example, the 'calling learners to prayer' action contributed to 'preparing learners for a lesson' and also a means to control their behaviour and share the teachers' preferred classroom etiquette.

The ADICO IGT (Crawford and Ostrom, 1995; Dunlop et al, 2019; Vannoni, 2021) was a power tool to analyse the large number of institutional statements listed by teachers in the interviews. However, it was difficult to differentiate between choice and scope institutions-in-use. Choice rules prescribe the actions teachers are obligated, prohibited and permitted to take whereas scope rules prescribe the outcome teachers intend to achieve. Ostrom's (2005, p.208) describes scope rules as those that: "affect a known outcome variable that must, must not, or may be affected as a result of actions taken within the situation". The shared institutions-in-use that prohibit corporal punishment, verbally abuse and shout at learners have an impact on learners and could be grouped as scope rules. However, they were grouped as choice institutions-in-use because they prescribed the conduct of teachers in their interactions with learners.

It is hoped that as more researchers begin to use the IAD framework to explore teaching modality and the structure that produces it, there will be more discussion on challenges and advantages of the framework that will allow for more nuanced ways of applying it to the teaching action situation.

7.6 Conclusion

As discussed in chapter two, educational researchers have provided rich descriptions of the teacher-centred modality dominant in public primary schools in South Africa. They

have also offered explanations for teachers choosing the teacher-centred modality that includes ~~endogenous~~ variables such as teachers' weak subject content knowledge and exogenous variables such as low cognitive capital in schools located in poor communities. They also suggest that there may be shared values and practices among teachers in poor schools. However, these researchers did not consider the notion of the teacher-centred teaching as an institution – structured regularised classroom interactions. As such, they are unable to explain what creates the structure of a lesson that produces the teacher-centred modality.

This study applied the IAD framework to explore the teacher-centred modality as an institution from the teachers' perspective. In doing so, the study was able to identify the shared exogenous variables that teachers believe influence teaching and the rules and norms that they adopt to structure a lesson. Analysis of the rules and norms shows that teachers' primary concern is complying with policy prescriptions and monitoring thereof; their conduct in a lesson and maintaining order in a lesson and learning is secondary. It also shows that where policy prescriptions are regularly monitored and the sanctions for noncompliance are considered harsh, teachers are more likely to adopt them as rules-in-use to prescribe what actions and outcomes they are obligated, prohibited and permitted to take and attain. However, it also shows that when teachers are unable to meet policy prescriptions, they are likely to manipulate them. These may lead to perverse incentives and outcomes.

The findings from the study reveal that the form of the typical teaching modality is similar to the action-sequence lesson routine promoted by the Foundations of Learning campaign. It divides the lesson into five parts that allows the teacher to prepare learners for their role in a lesson and to allow teachers to meet policy prescriptions, namely introduce new curriculum content, assign learning tasks, correct learners' work and mark learners' books. The rules and norms that teachers adopt that produce this teaching modality prescribe that they maintain an emotional distance from learners, control their emotions, comply with the prescriptions of the CAPS, accommodate slow learners and control classroom interactions. These rules and norms are influenced by legislation and policies, how teachers view their learners and overcrowded classes.

Ostrom (2005, p. 3) suggests that to understand institutions "one needs to know what they are, how and why they are crafted and sustained, and what consequences they generate in diverse settings." This study applied the IAD framework to explore the form of the typical teaching modality and to understand how it was created from a teachers' perspective. In doing so, it identified the exogenous variables that sustain it.

The next chapter will conclude the thesis.

CHAPTER 8: CONCLUSION

The purpose of the study is to make an original contribution to research on the persistence of the teacher-centred modality in public primary schools in South Africa. The study was done in the context of continual changes since the end of apartheid in 1994 to legislation (rules-in-form) to transform how teachers teach. These changes intended to shift the teaching modality from the teacher-centred modality dominant during apartheid in public primary schools to one that focuses on learning. The changes in the rules-in-form assumed that how teachers teach affects learning and measured learner performance.

Researchers have shown that in post-apartheid era, the teacher-centred modality remains dominant in public primary schools and continues to produce weak measured learner performance in schools in poor communities. The prevailing explanations for its persistence include that most teachers in public primary schools have weak subject content and pedagogical knowledge and do not take responsibility for measured learner performance. Furthermore, most learners in schools located in poor communities are not cognitively well-prepared for schooling, are not physically healthy and come from homes that do serve as second sites for curriculum acquisition. These schools in the main do not have functioning school management nor do they have a reservoir of cognitive resources in the form of school libraries and other physical facilities that facilitate learning; they do not have teachers with expertise and experience in subject content and pedagogical knowledge. Researchers have also shown that overcrowded classes affect teachers' choice of teaching modality and that teachers struggle to cope with the heterogeneity of learners in their classes and their heterogeneous preferences for classroom interactions.

A few researchers offer an alternative explanation – that the teacher-centred modality dominant in public primary schools located in poor communities may be the product of an "ingrained culture" or "shared values and practices". However, these researchers do not explain what this culture is or what the shared values and practices are and how and why they work; nor do they offer a means to explore them. Elinor Ostrom, working in the settings of politics and economics, offers an explanation for regularised social interactions such as the teacher-centred modality and the means to explore them.

Ostrom (2005) posits that regularised social interactions are constructed. In other words, whenever participants in a social space are acting in an organised manner, the situation is structured by "universal components" (Ostrom, 2005, p. 6) that influence their behaviour and the outcomes they achieve that affect themselves and other participants. Ostrom (2005, p. 3) refers to these regularised social interactions as institutions that are "the prescriptions that humans use to organize all forms of repetitive and structured interactions". Ostrom and her colleagues developed the institutional analysis and development (IAD) framework to explore and understand structured social spaces that produce institutions.[71] In the IAD framework the unit of analysis is the social space known as an action situation. The framework identifies the elements that make up an action situation and illustrates the logical relationship between them. It shows that an action situation is structured by three categories of exogenous variables: rules-in-use, attributes of the community and biophysical and material conditions. These exogenous variables act in configuration to create the opportunities and constraints that participants believe they face that produce the set of allowable actions and outcomes participants can choose from. The actions they choose generate interactions among participants that produce the outcomes of an action situation.

The study assumed that the teacher-centred modality is an institution in public primary schools in South Africa – structured by exogenous variables. It adapted and applied the IAD framework to answer the two research questions: what is the form of the typical teaching modality in public primary schools and what explains the persistence of the form of the typical teaching modality. The study adapted the IAD framework to explore the structure of the teaching action situation from the teachers' perspective.

[71] Workshop in Political Theory and Policy Analysis at Indiana University (Bloomington).

Additionally, it replaced rules-in-use with institutions-in-use. Rules-in-use have a "prescriptive force" (Ostrom, 1986) where participants who break a shared rule-in-use know that they will be sanctioned. Institutions-in-use include both rules with prescriptive force that are monitored externally and norms that are self-monitored. In this study the action situation or unit of analysis is the lesson – the social space where teachers interact with learners about the national curriculum statement. In the South African case it is the curriculum and assessment policy statement (CAPS).

The naturalistic research paradigm informed the design of the study. It applied the instrumental case study research methodology and related techniques to gather primary data, namely participant observation to collect data on teachers' choice of actions in the classroom and individual and small group interviews to collect data on the contextual variables that they believe affect teaching, including the institutions-in-use teachers adopt. The instrumental case allowed for focusing on the teaching modality and the contextual variables in three sample schools that were historically governed by different apartheid administrations. The three sample schools were selected from historically African, Coloured and Indian townships in the Johannesburg Central education district that were governed by different apartheid administrations prior to 1994: the Department of Education and Training, House of Representatives and House of Delegates for African, Coloured and Indian schools respectively. [72] The fieldwork occurred in the first three weeks of the third academic term in 2019.

This chapter concludes the thesis. It is organised into four sections. The first section discusses the contribution of the study to the literature. Section two lists the limitations of the study followed by suggestions for future research in section three. The closing section offers concluding remarks.

8.1 Contribution to Literature on the Persistence of the Teacher-Centred Modality

The study assumed that the teacher-centred modality is an institution in public primary schools in South Africa that is an outcome of teachers' shared understanding about the

[72] In this study the categories do not refer to race as an intrinsic human trait but rather as a bureaucratic tool that was originally employed by the apartheid state to entrench racist rules-in-form and policies and continue to be used in post-apartheid South Africa to monitor redress and ensure the socioeconomic rights of all South Africans (Posel, 2001).

structure of the lesson. The study applied the IAD framework to explore the form of the typical teaching modality and how teachers perceive the structure of a lesson (the opportunities and constraints they face) that influence their choice of actions in a lesson. In doing so, the study makes five valuable contributions to the literature on the persistence of teacher-centred teaching modality.

The first contribution of the study to the literature is to illustrate the application of the IAD framework to explore the complexity of the teaching. This allows researchers a means to explore how exogenous and variables that act in configuration affect the structure of teaching and influence teachers' choice of teaching modality. It highlights that changing single rules-in-form may not produce the intended outcomes when the other contextual variables, including rules-in-form, remain constant. Teachers will adapt the new rule-in-form to the existing structure which may result in perverse outcomes, such as teaching by discrete learning tasks or gaming the assessment regimen, as shown in this study.

The second contribution of the study to the literature is to illustrate how classroom interactions affect teachers' choice of actions. The study draws attention to Doyle's (2006, p. 117) view that it is "potentially misleading to study management processes without attention to curriculum or to imagine curriculum designs without attention to classroom processes." This study shows that teachers do not bifurcate their choices of classroom actions into instruction and management, or what Bernsteinian researchers refer to as instructional and regulative discourses (Singh, 2002; Hoadley, 2006; Reeves, 2005). This study shows that the institutions-in-use that prescribe how teachers conduct themselves in a lesson act in configuration. The five-part action-sequence teaching modality observed in this study concurrently establishes classroom conduct and transmission of curriculum content – it is a single discourse that "embeds competence in order and order in competence" (Bernstein, 2003, p. 160). Consequently, by assuming that rules-in-form act in an additive manner, interventions that tinker with rules-in-form prescribing the 'instructional discourse' and the 'regulative discourse' will not radically change the teaching modality.

The third contribution of the study to the literature is that it highlights that teachers are concerned about their conduct in a lesson. The literature on interactive teaching shows

that teachers' primary goal is to create order and stability in the classroom and maintain 'activity flow' by routinising lessons (Clark & Peterson, 1984; Fang, 1996; Shavelson & Stern, 1981). This study extends the latter argument by showing that the routines that teachers select to organise their lesson is also intended to help them control their emotions.

The fourth contribution of the study to the literature is that schools are not totally decoupled organisations and that teachers do respond to policy prescripts (Coburn,2004; Hautala et al., 2018) and adapt them to their contexts (Angrist & Meager, 2023; Berman & McLaughlin, 1975, 1977; McLaughlin, 1987; Weatherly & Lipsky, 1977). It advances the literature on mandated change and its attendant pressure and support by showing the coupling mechanism – teachers reinterpret rules-in-form to their context and adopt them as institutions-in-use. It confirms Meyer and Rowan's (1977) proposition that strong external bureaucratic accountability measures do lead to isomorphism – in this study the five-part action-sequence teaching modality observed across the three sample schools. However, the study shows that it is not an example of ceremonial compliance but of bounded autonomy. The study also highlights that bureaucratic accountability measures without intensive support led to perverse outcomes of delivering the curriculum content through discrete learning tasks.

The fifth contribution the study makes to the literature is that the institutional arrangements that structure the "grammar of schooling" (Tyack and Tobin, 1994) do not bring out the best in teachers. It incentivises teachers to limit their interactions with learners to focus instead on complying with curriculum prescriptions and not on learning.

8.2 Limitations of the Study

A significant limitation of the study was the review of literature. It was limited to publications, papers and reports that were written in English and mainly those from South Africa, Britain and the USA. It was also difficult to read all the literature that explored the numerous variables that influence teaching. Additionally, there were three other limitations to the study.

The first was that employing an instrumental case study methodology in only three sample schools in a single education district makes it difficult to generalise the findings across public primary schools in South Africa.

The second was that it was not possible to verify with teachers participating in the study the salient exogenous variables this study identified that structure the lesson, because of the strict COVID-19 lockdowns in South Africa that continued over two successive years.

Thirdly, applying the IAD framework to teaching without the guidance of related studies proved to be a challenge. Throughout the data-gathering and analysis processes I made decisions that I was not confident about, especially categorising the institutions-in-use into theoretical rule types. The interview schedule asked teachers about the must do's, must not do's and may do's of teaching. It did not ask teachers explicitly about the rules that they used to prescribe the different elements of the structure teaching. Consequently, teachers not listing rules prescribing positions, choice and payoffs may be a result of this omission. Furthermore, the 47 interviews produced a large number of institutional statements. Identifying and extracting these was time-consuming and an exacting process because teachers did not speak in institutional statements or norms and rules. The chapter on research design makes explicit the process of identifying and extracting institutional statements from the interview transcripts, I am unsure whether the process will hold in interviews conducted in multiple languages which is more likely the case in South Africa. I hope that the difficulties with applying the IAD framework have not adversely affected my analysis and interpretation.

8.3 Future Work

As it is the first time that the IAD framework was applied to teaching in South Africa, there were many elements of a lesson and teachers' behaviour that may affect teachers' choice of teaching modality that were not considered in the original design of the study and emerged during the analysis. . The following elements and teachers' behaviour will require further research:

1. ***How do teachers make decisions in a lesson?*** The data from classroom observations seem to indicate that teachers use the satisficing decision-making

process. While Hargreaves (2006) contends that "generational mission" influences teachers' decision-making, Sabarwal et al. (2022) argue that teachers' beliefs are important in their decision-making and Flaschen et al. (2024) draw on behavioural science to understand behavioural barriers. However, they do not explore the nature of teachers' decision-making process. Further research is required to determine whether teachers do use the satisficing decision-making process and, more importantly, identify what teachers' aspirational levels are – that is, when do teachers know that they have achieved their teaching outcomes in a lesson? Is there a percentage of learners who "understand" the curriculum content and can complete the assigned learning tasks that serve as the aspirational level?

2. ***Teachers' pay-off rules***: Teachers in the study did not list any costs or benefits for their choice of outcomes. While the study showed that teachers complied with the prescription of curriculum pace and prohibition of corporal punishment because the sanctions for noncompliance were harsh, it also showed that teachers considered learning a norm where they are accountable only to themselves. Further research is required on how teachers view incentives and sanctions for the outcomes of the lesson.
3. ***Apply the IAD framework to teaching in different school contexts:*** The study was limited to three schools in a single education district. Comparative analysis of exogenous variables that structure lessons in different contexts will provide more insights on how the teacher-centred teaching modality is created and sustained.
4. ***The conditions and resources necessary for changing behaviour through rules-in-form:*** The study showed that teachers comply with rules-in-form that are constantly monitored and where the sanctions for noncompliance are harsh. However, the study also shows that teachers game the prescriptions when they are unable to comply. Further studies are required to identify the conditions and resources required to institutionalise mandated change.
5. ***Teachers teaching heterogeneous learners:*** The study showed that the heterogeneity of learners is one of the exogenous variables that creates the structure of the teacher-centred modality. Further studies are required to explore

the kinds of assistance that teachers need to teach heterogeneous learners and to use it as a resource.

6. ***Teachers making explicit the learning outcomes and evaluative criteria:*** The study showed that teachers do not make explicit the learning outcomes for a lesson and the associated evaluative criteria. This study suggests that it is a means for teachers to assert their authority, control classroom interactions and mask their weak content knowledge. Further studies are needed to understand why teachers do not make the learning outcomes and evaluative criteria explicit.
7. ***Sanctions for learners:*** The study showed that teachers are disincentivised to formulate sanctions that are aligned to rules-in-form governing them. Further research is needed to explore this phenomenon.
8. ***Is the required pace of curriculum delivery an unfair policy prescription?*** Teachers struggled to adhere to the required pace of curriculum delivery and the inadvertent outcome was unofficially streaming learners – by accepting different quantities of work from learners. Further studies are required on how to assist teachers comply with the prescribed pace of curriculum delivery and attain learning for all learners. Recently, international organisations are promoting teaching at the right level (Angrist and Meager, 2023) as a means to address learning for all.

8.4 Conclusion

The study revealed how the structure of the lesson was produced that incentivised teachers to continue using a teacher-centred modality in the three sample schools. Ostrom (2005, p. 18) argued that "one cannot improve outcomes without knowing how the structure is itself produced." I sincerely wish that this study will encourage educational researchers in South Africa to consider exploring the structure of teaching so that we begin to understand teachers' incentives for selecting one teaching modality over others in different contexts. This can help with identifying exogenous variables that need to change to facilitate teaching for understanding.

I was inspired to conduct the study because the IAD framework appeared to be an elegant and simple means to studying the complexity of teaching. Its elegance made me feel confident that it will be easy to deal with the complexity of teaching. Yes, it is a

sharp framework, but it does not mean that there will be less thinking, I believe that it requires a great more deliberation and thoughtfulness.

APPENDIX A: ETHICS CLEARANCE CERTIFICATES

Figure 8: Ethics clearance from the Gauteng Department of Education.

GAUTENG PROVINCE
Department: Education
REPUBLIC OF SOUTH AFRICA

8/4/4/1/2

GDE RESEARCH APPROVAL LETTER

Date:	23 May 2019
Validity of Research Approval:	04 February 2019 – 30 September 2019 2019/41
Name of Researcher:	Vawda S
Address of Researcher:	72 Nottingham Road
	Kensington
	Johannesburg
	2094
Telephone Number:	072 123 4155/ 011 622 5151
Email address:	Shamima@icon.co.za
Research Topic:	How institutionalised instructional practices persists or change in South African public schools?
Type of qualification	Phd
Number and type of schools:	Three Primary Schools
District/s/HO	Johannesburg Central

Re: Approval in Respect of Request to Conduct Research

This letter serves to indicate that approval is hereby granted to the above-mentioned researcher to proceed with research in respect of the study indicated above. The onus rests with the researcher to negotiate appropriate and relevant time schedules with the school/s and/or offices involved to conduct the research. A separate copy of this letter must be presented to both the School (both Principal and SGB) and the District/Head Office Senior Manager confirming that permission has been granted for the research to be conducted.

23/05/2019

The following conditions apply to GDE research. The researcher may proceed with the

1

Making education a societal priority

Office of the Director: Education Research and Knowledge Management
7th Floor, 17 Simmonds Street, Johannesburg, 2001
Tel: (011) 355 0488
Email: Faith.Tshabalala@gauteng.gov.za
Website: www.education.gpg.gov.za

above study subject to the conditions listed below being met. Approval may be withdrawn should any of the conditions listed below be flouted:

1. *The District/Head Office Senior Manager/s concerned must be presented with a copy of this letter that would indicate that the said researcher/s has/have been granted permission from the Gauteng Department of Education to conduct the research study.*
2. *The District/Head Office Senior Manager/s must be approached separately, and in writing, for permission to involve District/Head Office Officials in the project.*
3. *A copy of this letter must be forwarded to the school principal and the chairperson of the School Governing Body (SGB) that would indicate that the researcher/s have been granted permission from the Gauteng Department of Education to conduct the research study.*
4. *A letter / document that outline the purpose of the research and the anticipated outcomes of such research must be made available to the principals, SGBs and District/Head Office Senior Managers of the schools and districts/offices concerned, respectively.*
5. *The Researcher will make every effort obtain the goodwill and co-operation of all the GDE officials, principals, and chairpersons of the SGBs, teachers and learners involved. Persons who offer their co-operation will not receive additional remuneration from the Department while those that opt not to participate will not be penalised in any way.*
6. *Research may only be conducted after school hours so that the normal school programme is not interrupted. The Principal (if at a school) and/or Director (if at a district/head office) must be consulted about an appropriate time when the researcher/s may carry out their research at the sites that they manage.*
7. *Research may only commence from the second week of February and must be concluded before the beginning of the last quarter of the academic year. If incomplete, an amended Research Approval letter may be requested to conduct research in the following year.*
8. *Items 6 and 7 will not apply to any research effort being undertaken on behalf of the GDE. Such research will have been commissioned and be paid for by the Gauteng Department of Education.*
9. *It is the researcher's responsibility to obtain written parental consent of all learners that are expected to participate in the study.*
10. *The researcher is responsible for supplying and utilising his/her own research resources, such as stationery, photocopies, transport, faxes and telephones and should not depend on the goodwill of the institutions and/or the offices visited for supplying such resources.*
11. *The names of the GDE officials, schools, principals, parents, teachers and learners that participate in the study may not appear in the research report without the written consent of each of these individuals and/or organisations.*
12. *On completion of the study the researcher/s must supply the Director: Knowledge Management & Research with one Hard Cover bound and an electronic copy of the research.*
13. *The researcher may be expected to provide short presentations on the purpose, findings and recommendations of his/her research to both GDE officials and the schools concerned.*
14. *Should the researcher have been involved with research at a school and/or a district/head office level, the Director concerned must also be supplied with a brief summary of the purpose, findings and recommendations of the research study.*

The Gauteng Department of Education wishes you well in this important undertaking and looks forward to examining the findings of your research study.

Kind regards

.....

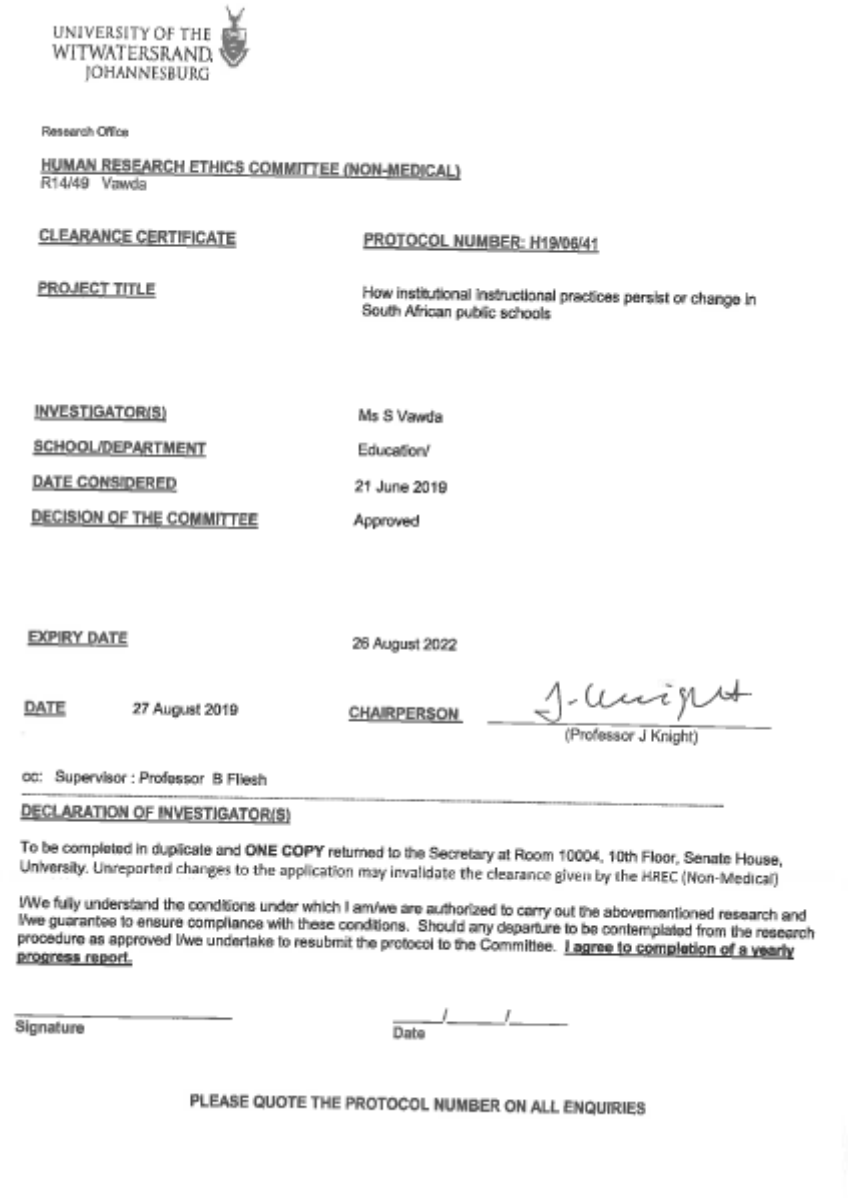
Mr Gumani Mukatuni
Acting Director: Education Research and Knowledge Management

DATE: 23/05/2019

Making education a societal priority

Office of the Director: Education Research and Knowledge Management
7th Floor, 17 Simmonds Street, Johannesburg, 2001
Tel: (011) 355 0488
Email: Faith.Tshabalala@gauteng.gov.za
Website: www.education.gpg.gov.za

Figure 9: Ethics clearance from the University of the Witwatersrand.



UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

Research Office

HUMAN RESEARCH ETHICS COMMITTEE (NON-MEDICAL)
R14/49 Vawda

CLEARANCE CERTIFICATE	PROTOCOL NUMBER: H19/06/41
PROJECT TITLE	How institutional instructional practices persist or change in South African public schools
INVESTIGATOR(S)	Ms S Vawda
SCHOOL/DEPARTMENT	Education/
DATE CONSIDERED	21 June 2019
DECISION OF THE COMMITTEE	Approved
EXPIRY DATE	26 August 2022

DATE 27 August 2019 CHAIRPERSON (Professor J Knight)

cc: Supervisor : Professor B Fliesh

DECLARATION OF INVESTIGATOR(S)

To be completed in duplicate and **ONE COPY** returned to the Secretary at Room 10004, 10th Floor, Senate House, University. Unreported changes to the application may invalidate the clearance given by the HREC (Non-Medical)

I/We fully understand the conditions under which I am/we are authorized to carry out the abovementioned research and I/we guarantee to ensure compliance with these conditions. Should any departure to be contemplated from the research procedure as approved I/we undertake to resubmit the protocol to the Committee. **I agree to completion of a yearly progress report.**

Signature Date

PLEASE QUOTE THE PROTOCOL NUMBER ON ALL ENQUIRIES

APPENDIX B: TRANSCRIPTS OF THREE LESSONS

Grade 2 isiZulu Lesson in School A

Contextual Information

In 2019, School A had Coloured learners from the township and African learners from the informal settlements near the school. School A offered isiZulu as the third additional language in foundation phase, with English as the home language and Afrikaans being the second additional language. One teacher was employed by the Gauteng Department of Education (GDE) on an annual contract to teach isiZulu in two neighbouring schools. The teacher spent three days in one school and the remaining two days of the school week at the second school. In the following week she spent two days at the first school and three days at the second school. She continued this alternation throughout the academic year. At School A she was allocated 35 minutes or a period per day with each of the 11 grades 1, 2 and 3 classes.

On Monday 5th August 2019, the first period for Grade 2B was isiZulu. The isiZulu teacher was young and a recent graduate from the University of Johannesburg. She was desperate to secure a full-time post. She told me that as a Black African graduate she had to fulfil numerous family expectations. In addition to sharing her salary with her family she was expected to at least renovate the family home and purchase a car. She talked about the strain she felt because of her precarious teaching contract with the GDE. She was dressed modestly with no fashionable accessories. Her demeanour was that of a 'student' or 'guest' teacher. While she had space in the classroom cupboards for the learners' isiZulu Department of Basic Education (DBE) workbooks and learners' exercise book, she traversed the classroom like a visitor. In the lesson observed, for example, she used a small part of the chalkboard to list the names of colours in isiZulu for the learners to copy in their exercise books; it did not touch the class teacher's chalkboard work.

The classroom was painted a bright canary yellow and was well-resourced with furniture and fixtures. There were wooden built-in cupboards waist high against the back and right-hand side walls. One of the built-in cupboards had a sink with plumbing. Unfortunately, due to vandalism and crime, the school removed all the taps. In the previous year all the classrooms in the block were vandalised: the taps were left running flooding the classrooms; the stationery was stolen, and learners' books were strewn across the school grounds. To mitigate future vandalism, the school removed all taps in the classroom. This valuable infrastructure was no longer available to teachers and learners.

The front wall of the classroom had a long chalkboard that was flanked by two tall cupboards. There was a felt pin-board running parallel above the chalkboard. The left-hand side wall also had a felt pin-board.

The classroom walls and pin-boards were decorated with both commercial and teacher-made educational charts. The classroom appeared to have a variety and sufficient amounts of learning and teaching support material (LTSM); there were abacuses and counters on the countertops of the build-in cupboard.

The classroom space was divided into four sections; at the front there was a mat on the floor to facilitate whole-class teaching, at the back left corner there was a 'reading corner' with a bookshelf and a couple of cushions for learners to sit on when they were engaged in independent reading, the right corner had the teacher's desk, and the rest of the space was allocated for learners' desks and chairs.

In School A, the principal whose career started in teaching in the foundation phase had made it obligatory for teachers in Grades 1, 2 and 3 to conduct whole-class teaching on the mat and seatwork at learners' desks. She also encouraged her teachers to allow their learners to read independently at the reading corner. The remaining available space would have comfortably fitted desks and chairs for 20 learners; School A had a classroom ratio of one teacher to forty learners. The forty desks and chairs were squashed into this space. The learners' desks were arranged in groups of four. The groups of four desks were arranged in a grid, three groups of four desks in the side columns and four groups in the middle column. The spaces between the groups of four desks in a column was narrow and made the arrangement appear like a continuous column so that learners were seated facing each other. There was just enough space between the columns for the teacher to walk around. Unfortunately for learners sitting on the side columns with their backs against the wall or built-in cupboards, the teacher had to stretch over the desks to give them individual attention.

There were very few books on the bookshelf in the reading corner: a small number of story books and photocopies of the graded readers. According to the class teacher the learners were not gentle with the graded readers during independent reading or reading at home. Consequently, she got the parents to make photocopies of the graded readers for independent reading and for taking the readers home. She only used the original graded readers during whole-class reading.

The classroom was very untidy, the floors were dirty, and LTSM appeared to be shoved into the cupboards or scattered across the countertops of the built-in-cupboards. The Grade 2B class teacher had apologised for the untidiness; she explained that she was absent the previous Friday and had no time to neaten the class that morning because of Monday morning assembly.

The day began with the morning prayer led by the class teacher. All the learners joined in reciting the prayer aloud. The class teacher then left the classroom to the isiZulu teacher who was handing out the DBE workbooks to the learners during the morning prayer.

The isiZulu teacher delivered the lesson using 12 actions. The lesson introduced new vocabulary in isiZulu related to clothing, fashion accessories and colours. The isiZulu teacher's interactions with her learners were mainly to offload the DBE workbook, get learners' attention and assign a learning task to learners to complete in their exercise books.

Action 1 – Doing a Learning Task Together

The teacher stands in front of the class and asks the whole class to sing the isiZulu song about discipline. All the learners are familiar with the song and sing aloud together. They sing standing beside their desks and make body actions related to the song. At the end of the song, the teacher begins singing a second song about the names of body parts. The whole class sings along with her and point out the different body parts on their bodies that are mentioned in the song. At the end of the song, the teacher starts singing a song about numbers and counting which the learners all sing aloud with her. When the counting song ends, she continues with singing the last song about naming parts of the face which the learners join in pointing to their nose, eyes, mouth, etc. as they sing along.

Action 2 – Preparing Learners for the Lesson

The teacher asks the whole class to open their isiZulu DBE workbook to page 25.

The worksheet on page 25 is divided into two parts. The top half of page 25 has a graphic illustration of the inside a clothing boutique. It depicts two clothes racks, a sales lady, a potential customer, and a stack of shoes on the floor. Some of the items have price tags in Rands. The clothes rack on the left displays three shirts hanging vertically. The clothes rack on the right has three dresses and two necklaces.

The bottom half on page 25 has a table with five rows and six columns. The columns have graphics of different items of clothing, shoes, sandals; four cells have a crayon of a different

colour in each; and two cells are shaded in black and white respectively. The columns adjacent to the graphics have the names of these items.

Action 3 – Reading Text from Textbook/DBE Workbook/Assessment Sheets

The teacher continues standing in front of the class and points to elements in the picture and asks learners to identify them in isiZulu. She starts with pointing to the necklace on the rack on the right-hand side. All the African learners shout out the name in isiZulu while the Coloured learners shout out the name in English. She then asks the whole class to repeat after her 'necklace' in isiZulu. She continues this action by pointing at another four items in the graphic. Again, the African learners shout out the names in isiZulu and the Coloured learners screamed the answers in English.

Action 4 – Focusing Learners' Attention

The learners are easily distracted; a few appear bored, some are yawning and seem to want to sleep, and others are chatting, fighting, walking around, and crawling under the desks. The teacher uses the 'clap, clap, clap' classroom management technique to focus their attention. She shouts "clap, clap, clap" while she clapped her hands in sync. The technique works because the learners focused their attention on her for the moment, and stopped talking, fighting, playing, crawling under the desks, and walking around.

Action 5 – Reading Text from Textbook/DBE Workbook/Assessment Sheets

She continues with pointing at the graphic in the table and reads aloud the name which is written in isiZulu next to the picture. The whole class repeats the word aloud:

The teacher points at the skirt and reads aloud "isikheti".

The whole class repeats after her "isikheti".

The teacher points at the pair of shoes and reads aloud "izicathulo".

The whole class repeats after her "izicathulo".

The teacher points at the red crayon and read aloud "libomvu"

The whole class repeats after her "libomvu".

The teacher points at the yellow crayon and reads aloud "lipuzi"

The whole class repeats after her "lipuzi"

The teacher's attention is focused on one side of the classroom while standing in front. The learners appear bored and a few are falling off to sleep. She does not seem to know all the learners' names; this may be a result of her limited time with them and the many classes that she teaches in a week that span two schools and all the foundation phase classes.

Action 7 – Using the Chalkboard

She transitions to the next action smoothly by reciting more colours in isiZulu while handing out the learners' exercise books. After handing out learners' exercise books she walks to the chalkboard and writes the date and a list of colours in isiZulu.

Action 8 – Assigning Learning Tasks

She asks the learners to open their exercise books and copy the date and words from the chalkboard.

Action 9 – Monitoring Completion of Learning Tasks

She walks around the classroom checking on the learners' progress copying from the chalkboard and to keep their attention focused on the copying task. At least half of the learners are meticulously copying from the chalkboard; the rest of the class walks around, chat to their neighbours, fight with their friends and borrow stationery.

Action 10 – Solving Practical Problems

Many of the learners do not have stationery. She gives a few learners new pencils that she finds on the classroom teacher's desk.

Action 11 – Focusing Learners' Attention

To get all the learners to focus on copying the words from the chalkboard into their exercise books, she uses another classroom management technique; "ONE, TWO, THREE". This is a physical activity that makes learners stop whatever they are doing and physically respond to her call. She shouts "ONE", in response learners lift their hands up. She shouts "TWO", learners bring their hands forward. She shouts "THREE" which gets learners to place their index finger on their lips.

Action 12 – Accepting Uneven Quantities of Work

After a few minutes she starts collecting learners' exercise books. The 'fast' learners have copied all the words in their exercise books; unfortunately, many of the learners have not completed the learning task. Some of the learners have not even started the learning task. She

does not appear to be concerned about this; she seems to have accepted it as inevitable that there will be different quantities of work in learners' exercise books.

Action 12 – Keeping Learners Busy

While the teacher is collecting the learners' exercise books and DBE workbooks, she asks them to count to 10 in isiZulu. As the whole class counted from one in isiZulu the school siren rings to signal the end of the period. She has to leave to teach the next class, so she asks all the learners to sit quietly with their fingers on their lips while they wait for their class teacher to return.

Grade 3 Mathematics Lesson in School C

Contextual Information

The Grade 3 mathematics lesson in School C observed was near the end of the school day. It was the period after the second lunch break. The Grade 3 teacher was young and a recent graduate from the University of the Witwatersrand in Johannesburg. She had a quiet yet firm manner about her. She was dressed in trendy clothes and wore her hijab very stylishly. Her mom was also teaching foundation phase at the school. The classroom was exceptionally clean and tidy. Learners' desk and chairs were arranged in pairs in rows and columns; in this arrangement of furniture there was opportunity for two learners to work together. There was sufficient space for the teacher to walk around as there was no reading corner for independent reading or a mat in the front of the classroom for doing whole-class teaching. The teacher appeared to be fastidious; she had the learners exercise books and textbooks neatly stacked in the respective pigeonholes in a cupboard against the wall next to her desk. Her desk was covered with a bright print tablecloth. She had decorated the classroom walls with posters that she had made.

There were 41 learners in the class. They were copying work from the chalkboard into their exercise books that they had begun before the second lunch break. On the chalkboard the teacher had written 'division' as the topic heading. Below the heading there were mathematical symbols with the names spelled out in English, for example, "+ plus". There were four learners walking around and one learner asking for a new exercise book because her current book was full. While learners completed the copying from the chalkboard, the teacher was arranging the district exam papers that she had collected during the break for distribution to the other Grade 3 teachers. She asked three learners to deliver these to the other Grade 3 teachers. When these learners returned the teacher started teaching new curriculum content.

The lesson focused on improper fractions. It was about translating a 'word problem' into a mathematical syntax. She used the textbook and counters to help her teach division. She controlled learners' engagement with both of these LTSM. It took 23 actions to deliver the lesson; five of the actions were managing the classroom. She also used lesson time to complete urgent administration required by the education district.

Action 1 – Preparing Learners for the Lesson

There is no formal introduction to the improper fractions; the transition is done by asking learners to close their exercise books and to place their hands on their desks. She asks one leaner to hand out the mathematics textbooks. While the learner distributes the textbooks, she instructs the class to open to page 17. Concurrently, she gets the class to settle down in their chairs, focus their attention from the previous learning task of copying work from the chalkboard into their exercise books, and to keep quiet. She repeats her instructions to 'stop talking', to 'be still', and to 'open the textbook to page 17 – grouping and sharing'.

Action 2 – Reading Text from Prescribed Textbook

She moves to the front of the classroom and asks the class: "look at page 17 – grouping and sharing." She reads the introductory text aloud to the whole class and the first "word problem" question that followed the paragraph. The first "word problem" requires learners to provide the mathematical syntax of simple division - dividing 12 biscuits among four friends.

Action 3 – Demonstrating Concepts and Teaching Using LTSM

She asks for four learners to volunteer. The whole class is keen to participate, and all lift their hands to volunteer. The teacher selects four learners. She takes out 12 counters from a jar on her table. She explains to the class that the counters represent the biscuits in the first question in the textbook. She hands out one biscuit to each of the four learners; she repeats a second round with the remaining eight biscuits; and does a third round of distribution. As she hands out the biscuits to the four volunteers the rest of class count aloud with her. When all the biscuits are handed out, each of the volunteers has to report to the whole class how many biscuits they each got.

Action 4 – Asking Closed-ended Questions

After all four volunteers show their three 'biscuits' to the class, the teacher asks the whole class: "What is my division sum?"

Too few of the learners volunteer to answer this question.

The teacher explains the question; that the distribution of the 12 ‘biscuits’ to the four volunteers, results in an equal distribution of biscuits. She asks the class “what is the division sum.”

Again, too few learners volunteer. The teacher chooses a learner randomly to give her the answer. Unfortunately, this learner does not provide the syntax of the division sum.

The teacher explains the question again: “12 biscuits and 4 learners and each get three?” She points at another learner for a possible answer. This learner also does not provide her with an answer. She repeats the question and points at another learner for the answer. The fourth learner answers: “$\frac{12}{4} = 3$”

Action 5 – Reading from Textbook/DBE workbook/Assessment Sheet

After the fourth learner gives the correct answer the teacher asks the whole class to read the next question in the textbook. Together they read the second question aloud in one long song. The teacher asks them to read it again. This question requires the mathematical syntax for dividing eight sweets among three friends.

Action 6 –Using LTSM for Demonstrations

The teacher asks for four volunteers. Again, the whole class volunteers. The teacher selects four volunteers. She asks one volunteer (Ayanda)[73] to share the eight ‘sweets’ among the three other volunteers (friends). She explains to Ayanda that the counters in the jar represent the sweets in the problem and that she should work out the sum by distributing the ‘sweets’ between the ‘friends’.

Ayanda hands out two rounds of ‘sweets’ to her ‘friends’ while the rest of the class counts with her. Each of her ‘friends’ have to report to the whole class how many ‘sweets’ they received. The friends reported: “3”, “3”, and “2.”

Action 7 – Explaining Written Questions

The teacher explains that in this problem the ‘sweets’ are not equally distributed. She continues her explanation that when each of the ‘friends’ gets two sweets, the distribution is equal but there are two sweets remaining.

[73] The names of learners have been changed to protect their identities.

Action 8 – Asking Closed-ended Questions

After this explanation, the teacher asks the whole class: “So what will my division sum be?”

There are many more volunteers in this round. The teacher repeats the question: “We have eight sweets shared among three friends.” The teacher points to Andile, a non-volunteer for the answer. He does not respond. The teacher points to another non-volunteer and repeats the question: “eight sweets we divided by three; what’s my division sum?” The teacher continues to point at another two non-volunteers. Both do not answer her question. She finally asks one of the volunteers who gives her the correct answer: “$\frac{8}{3} = 2\ and\ remainder\ 2.$”

Action 8 – Reading Text from Prescribed Textbook/DBE workbooks/Assessment Sheet

After getting the correct answer from one of the learners she asks the class to read together aloud the third question in the textbook. Again, the whole class read aloud in a long song. The question requires the division syntax for sharing 15 pencils among five friends.

Action 9 – Using LTSM for Demonstrations

She asks for volunteers to demonstrate the division. Again, the whole class volunteers. The teacher selects six learners.

The teacher asks the whole class: “How many counters will he [the volunteer] need?”

The whole class shouts: “15”

The volunteer distributes the ‘pencils’ among the five ‘friends’. The whole class counts with him as he distributed the pencils, “1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15.”

Action 10 – Asking Closed-ended Questions

The teacher asks the whole class: “How many was shared?”

The class shouts: “three.”

The teacher summarises: “So each ‘friend’ got three.”

The teacher then asks: “So give me the division sum.”

Again, there are many volunteers. The teacher asks Bongani who could not answer the previous question when she had pointed to him. Bongani answers: “$\frac{15}{5} = 3.$”

Action 11 – Affirming Learners Good Behaviour

The teacher asks the whole class to clap for Bongani because he now understands the word problem. The whole class claps together. The teacher is very pleased with Bongani and tells the class that he deserved a sweet.

Action 12 – Assigning Learning Tasks

The teacher instructs the whole class to answer the first two questions form the textbook that were completed together in their respective exercise books quietly on their own. She gives them clear instructions that they must copy the question from the textbook, then they must write down the correct answer (syntax), and finally draw the distribution.

Action 13 – Accepting Uneven Quantities of Work

The three-column of desks arrangement is used to 'stream' learners into three groups; Group 3 is for 'weak learners'. She instructs learners in Group 3 to answer only the first question in their exercise books and for the rest of the class must complete questions 1 and 2 in their exercise books.

Action 14 – Reminding Learners of Classroom Protocols

She reminds learners to place the textbooks in the pigeonhole once they have completed the learning tasks.

Action 15 – Monitoring Completion of Learning Tasks

She walks around the class to monitor learners work and to keep them focused.

Action 16 – Regulating Learners' Behaviour

While walking around the class, the teacher breaks up a fight between two boys.

Action 17 – Focusing Learners' Attention

The teacher focuses learners' attention on completing the assigned learning tasks by repeating the instructions, and asks them to 'stop talking'.

One learner asks her permission to go for a toilet break.

She notices that learners are struggling with the second question: $\frac{8}{3} = 2\ and\ remainder\ 2.$

She explains the distribution again.

Action 18 – Focusing Learners' Attention

Learners do not work quietly; there is a constant buzz of learners chatting, fighting, and laughing. The teacher shouts at one learner for making a loud noise: “stop screaming for everything, just shoosh.”

She does not allow learners the opportunity to explore on their own or with their neighbours more distributions using the counters to deepen and consolidate their understanding of division.

Action 19 – Permitting Learners to Work Independently

A few of the leaners complete the questions in their exercise books quickly. The teacher reminds them to place their textbooks in the pigeonhole and to do “mental maths” or SUDOKU.

The teacher hurries the learners to complete the learning tasks so that they can mark and do corrections. She tells me that “marking is a way of doing the work again. It also gives me a chance to look at their progress.”

Action 20 – Monitoring Completion of Learning Tasks

The teacher constantly walks around the class, focusing learners’ attention on completing the learning task and reminding them of her classroom protocols: “close books and return to pigeonhole” (addressing learners who have completed their questions in the exercise books).

Teacher: “Hurry up so that we can mark and do corrections.”

Teacher: “Please sit down.”

Teacher: “I don’t want untidy work.”

Teacher: “Read what you wrote.”

There are a few learners who are struggling conceptually with division. After a while, the teacher asks the class to stop their work and return the textbooks to the pigeonhole. They do not mark this work; it appears that the teacher is satisfied with the amount of work that learners have completed in their exercise books.

Action 21 – Keeping Learners Busy

The teacher asks the learners to open their DBE mathematics workbook to pages 44 and 45. She instructs them to place their school bags between themselves and their neighbour and to complete the questions on number patterns. She explains to the class that they are doing a

‘mock test’ in preparation of the third-term assessments. She stresses that they must complete the questions on their own.

Action 22 – Focusing Learners’ Attention

The class is never completely quiet. In this last learning task there are six learners walking around. The teacher appears to prefer a neat and tidy classroom; she asks the learners to “look at their rows [desks and chairs], does it look straight?” Learners respond by tidying their desks into straight rows and columns. She tells the class to continue with the mock assessment and that she does not want to hear a sound from them.

Action 23 – Performing Administration

The teacher walks to her table to complete administration work that is urgently due at the end of that day.

The school siren rings to signal the end of the lesson.

Grade 5 Natural Science Lesson in School C
Contextual Information

The Grade 5 natural science teacher was middle-aged and well-liked by his colleagues at the school; they talked fondly of him being the ‘life’ of their social gatherings. According to them he had a wealth of knowledge and experience on issues related to classroom discipline. He was dressed very smartly in a formal suit pants complemented with a crisp shirt and a sports blazer.

The classroom was very untidy; the floor was littered with paper and the learners’ desks and chairs were in disarray. It was barren; there was no indication that in this classroom learners got to learn about natural sciences. The teacher’s table had nothing on it.

The natural science lesson was centred on copying the diagram of the food pyramid from the textbook into their exercise book. The teacher encouraged learners to make beautiful replicas in their exercise books; there was no discussion on the food pyramid. The period was divided into two distinct parts; getting the learners into the classroom and ensuring that they have evidence of learning in their exercise books. The lesson was delivered in five actions.

Action 1 – Preparing learners for the lesson

The lesson is immediately after the second lunch break. Only nine learners enter the classroom immediately after the school siren rings to signal the end of the lunch break. One of

the nine learners straightaway requests permission to leave the classroom to drink water. The teacher declines his request. During the next 10 minutes another five learners enter in dribs and drabs while making lots of noise. At this point the teacher decides to go outside and to direct the learners to the classroom. Of the 14 learners in the classroom, a handful opened their textbooks and exercise books. It takes the teacher more than 15 minutes to direct all the learners from the playground to the classroom and to settle down at their desks.

Action 2 – Assigning Learning Task

The teacher stands in front of the classroom next to his barren desk where he invited me to sit and starts the lesson by instructing the learners to "take out your books. We are doing food pyramid, page 137." He then tells me "The learners are forgetting their books." In the same breath, he continues his instruction: "You are drawing the food pyramid." One learner distracts him by asking for stationery; "Sir, I am asking for a pen." The teacher looks at me conspiratorially and says: "Discipline is a problem, rudeness."

Not all the learners have taken out their textbooks and exercise books. The teacher continues to complain to me that "that boy in the back, they don't do their projects. That one is very, very rude, the mother is always coming to school." While he is complaining to me about the learners' attitudes and behaviour, the class is making a racket. He ignores the noise and continues to complain. He decries the quality of learners work in their exercise books: "Finishing their work is very difficult. If I show you their work, it's a mess." He instructs the class to copy the food pyramid from the textbook into their exercise books: "Take out your books. Are we done with the food pyramid?"

It appears that the copying of the food pyramid from the textbook into their exercise book is a continuation of the previous natural science lesson. Unfortunately, the teacher makes no further reference to the previous lesson in his instruction. It is difficult to corroborate this because he did not have time to speak to me.

Action 3 – Focusing Learners' Attention

The teacher repeats the earlier instructions to the entire class to take out their exercise books and to copy the food pyramid diagram from the textbook into their exercise book. A few learners diligently start copying the food pyramid in their exercise books. The rest of the class continues chatting, arguing, sharing stationery, and slowly begin to copy the food pyramid diagram in their exercise books.

Action 4 – Monitoring Completion of Learning Task

The teacher walks around the classroom glancing at learners' progress in completing the simple copying task. He notes that many of the learners are drawing small triangles and instructs the whole class that they should "make it large" to ensure that it can be divided into "four columns." He continues walking around the classroom, glancing at learners work and repeating to the whole class: "Make it a bit bigger, it must have four columns." On one of his laps around the classroom he picks up a paper and throws it out of the window. He appears unperturbed by some of the learners walking around the classroom and others talking and joking with their neighbours. In addition to instructing the whole class to draw bigger triangles; he encourages them to "use lovely colours to make it nice" and to "finish-up quickly." At no time in the lesson does he sit down, he continues walking around the classroom and making comments to individual learners about the quality of copying and checking his mobile phone. He never discusses the concept of a food pyramid or its value in healthy diets.

Action 5 – Giving Feedback

When a few learners bring their completed work for him to assess, he remarks to them about the form of the illustration. He comments to one learner that her pyramid is too small and that she should make it bigger. To another he advises that she should colour it in. While these learners have completed the copying, there is one learner who did not start the copying. The school siren rings to signal the end of the period. On cue the learners pack their bags and rush out of the class in a big noise. It takes the learners less than three minutes to leave the classroom. The teacher does not conclude the lesson, nor does he give learners permission to leave the classroom.

APPENDIX C: CUMULATIVE LIST OF TEACHERS' CHOICE OF ACTIONS

Table 7: Categories of actions by description of actions, education phase, frequency of use and dimensions of teachers' work.

Categories of Actions	Description of Actions	Grade R (n=3)	Foundation Phase (n=20)	Intermediate Phase (n=19)	Senior Phase (n=12)	Frequency	Dimensions of Teachers' Work
Assigning learning task: Assigning cognitively simple learning tasks for learners to complete on their own.	This category of action includes the teacher assigning the following learning tasks for learners to do on their own: 1. Completing a learning task from the textbook or chalkboard in their exercise book. 2. Completing a worksheet in the DBE workbook 3. Copying text from the textbook or chalkboard in their exercise book. 4. Making, painting, or drawing an artefact in Grade R. 5. Playing with manipulatives in Grade R.	4	15	12	7	38	Delivering curriculum content.

Categories of Actions	Description of Actions	Grade R (n=3)	Foundation Phase (n=20)	Intermediate Phase (n=19)	Senior Phase (n=12)	Frequency	Dimensions of Teachers' Work
Monitoring completion of learning task	This category of action includes the teacher: 1. Walking around the classroom checking on learners completing the assigned learning task on their own. 2. Helping individual learners and groups of learners with further explanations to help them to complete the assigned learning task on their own. 3. Assessing whether learners are able to complete the assigned learning tasks. 4. Providing feedback to learners on their progress to completing the learning task.	3	12	10	6	31	Delivering curriculum content.
Asking closed-ended questions: Asking closed-ended questions and	This category of action includes the teacher: 1. Asking learners to recall curriculum content read from the textbook.	2	14	8	7	31	Delivering curriculum content.

Categories of Actions	Description of Actions	Grade R (n=3)	Foundation Phase (n=20)	Intermediate Phase (n=19)	Senior Phase (n=12)	Frequency	Dimensions of Teachers' Work
searching for the single correct answer.	2. Soliciting the correct answer as a signal that learners understand the content which teachers used as an indicator of understanding and permission to move on to the next topic. 3. Accepting the correct answer without exploring the incorrect responses. 4. Ignoring incorrect answers. 5. Asking learners a battery of questions in quick sequence to assist them with completing the assigned learning task on their own.						
Focusing learners' attention: Focusing learners' attention on the actions of	This category of action includes the teacher: 1. Stopping learners from continuously:	4	14	7	5	30	Controlling classroom interactions

Categories of Actions	Description of Actions	Grade R (n=3)	Foundation Phase (n=20)	Intermediate Phase (n=19)	Senior Phase (n=12)	Frequency	Dimensions of Teachers' Work
teachers and completing the assigned learning tasks.	a. Chatting, walking around the classroom, fidgeting, sharing stationery. b. Teaching each other. c. Doing activities unrelated to the teacher's instructions. d. Distracting the teacher. 2. Instructing learners to tidy their desks as a way to focus their attention.						
Preparing learners for the lesson.	This category of action includes the teacher: 1. Directing learners from the playground into the classroom to attend the lesson. 2. Permitting learners to enter the classroom to attend the lesson. 3. Writing the date and topic on the chalkboard to signal the start of a lesson.	2	8	12	5	27	Controlling Classroom Interactions

Categories of Actions	Description of Actions	Grade R (n=3)	Foundation Phase (n=20)	Intermediate Phase (n=19)	Senior Phase (n=12)	Frequency	Dimensions of Teachers' Work
	4. Instructing learners to open the textbook/DBE workbook/exercise books to a given page to signal the start of a lesson. 5. Greeting learners and checking on their well-being. 6. Doing a call-and-response mantra signalling the start of a lesson. 7. Instructing learners to tidy the classroom and straighten their desks to ready themselves for the lesson. 8. Instructing learners to do physical exercises to energise them for the lesson.						
Doing a learning task together: Doing a learning	This category of action includes the teacher encouraging the whole class to participate together in:	4	11	2	2	19	Delivering curriculum content

Categories of Actions	Description of Actions	Grade R (n=3)	Foundation Phase (n=20)	Intermediate Phase (n=19)	Senior Phase (n=12)	Frequency	Dimensions of Teachers' Work
activity together as a whole class.	1. Counting, singing, spelling, repeating vocabulary, exercising, telling a story for digraphs, reading graded readers. 2. Revising mathematical algorithms. 3. Answering past exam papers.						
Regulating learners' behaviour: Regulating learners' behaviour to comply with classroom etiquette.	This category of action includes the teacher: 1. Breaking up fights between learners. 2. Stopping bullying by learners. 3. Disallowing chewing gum and eating in the classroom by learners. 4. Stopping learners talking while the teacher is speaking. 5. Encouraging learners to raise hands to ask or to answer questions.	3	10	4	2	19	Controlling classroom interactions

Categories of Actions	Description of Actions	Grade R (n=3)	Foundation Phase (n=20)	Intermediate Phase (n=19)	Senior Phase (n=12)	Frequency	Dimensions of Teachers' Work
	6. Soothing learners by saying sorry to those who are crying because of bullying and slight physical injuries. 7. Disparaging learners who are rude. 8. Insulting learners and their parents for their insolence. 9. Correcting learners' grammar. 10. Instructing learners to only use English in the classroom. 11. Prohibiting learners from copying from each other the products of the assigned learning tasks. 12. Obligating learners to work on their own to complete the assigned learning tasks. 13. Obligating learners to adopt socially acceptable manners.						

Categories of Actions	Description of Actions	Grade R (n=3)	Foundation Phase (n=20)	Intermediate Phase (n=19)	Senior Phase (n=12)	Frequency	Dimensions of Teachers' Work
	14. Resolving conflicts between learners. 15. Permitting learners to leave the classroom for toilet breaks. 16. Controlling the frequency of toilet breaks by individual learners.						
Using the chalkboard: Defining, listing, explaining and consolidating concepts on the chalkboard.	This category of action includes teachers using the chalkboard for: 1. Drawing processes on the chalkboard to demonstrate concepts including scientific theories. 2. Writing new vocabulary on the chalkboard. 3. Stressing facts by writing them on the chalkboard. 4. Illustrating mathematical algorithms on the chalkboard.	2	9	2	5	18	Delivering curriculum content

Categories of Actions	Description of Actions	Grade R (n=3)	Foundation Phase (n=20)	Intermediate Phase (n=19)	Senior Phase (n=12)	Frequency	Dimensions of Teachers' Work
Reading from textbook/DBE Workbook/Assessment sheets: Reading text from prescribed textbooks/DBE Workbooks/assessment sheets.	This category of actions includes the teacher: 1. Reading paragraphs from the prescribed textbooks/DBE workbooks. 2. Referring to pictures in the prescribed textbooks/ DBE workbooks. 3. Reading out aloud the questions written in prescribed textbooks/DBE workbooks/assessment sheets. 4. Reading questions from the formal assessment sheets (tests and examinations for the third term).		6	5	5	16	Delivering curriculum content
Explaining written questions: Explaining in-depth	This category of action includes the teacher: 1. Spelling out the expectations of the written questions in prescribed		3	5	3	11	Delivering curriculum content

Categories of Actions	Description of Actions	Grade R (n=3)	Foundation Phase (n=20)	Intermediate Phase (n=19)	Senior Phase (n=12)	Frequency	Dimensions of Teachers' Work
written questions from texts.	textbooks/DBE workbooks/assessment sheets. 2. Decoding how the learners should answer the questions in prescribed textbooks/DBE workbooks/assessment sheets.						
Accepting uneven quantities of work: Accepting different quantities of the assigned learning tasks that learners must complete on their own (seat work).	This category of action includes the teacher: 1. Walking around the classroom and checking that a reasonable number of learners completed the assigned learning task in their exercise books or that there is adequate evidence of learners completing the learning task in their exercise books.[74]		6	4		10	Assessing teaching outcomes

[74] This was an observation while walking around the classroom and it was not verified with the teachers.

Categories of Actions	Description of Actions	Grade R (n=3)	Foundation Phase (n=20)	Intermediate Phase (n=19)	Senior Phase (n=12)	Frequency	Dimensions of Teachers' Work
Solving practical problems: Helping learners to solve practical problems.	This category of action includes the teacher: 1. Sharing their stationery with learners. 2. Sharpening learners' pencils. 3. Putting band-aid on learners' cuts and bruises. 4. Ensuring learners have equitable access to the textbook when they are required to share them.	3	4	1	1	9	Solving practical problems
Correcting products of learning tasks: Correcting previously assigned learning tasks and formal assessments.	This category of action includes the teacher: 1. Reading the questions from the assigned learning tasks. 2. Explaining the questions from the assigned learning tasks. 3. Asking for the correct answers to the questions in the assigned learning tasks.		1	4	4	9	Assessing teaching outcomes

Categories of Actions	Description of Actions	Grade R (n=3)	Foundation Phase (n=20)	Intermediate Phase (n=19)	Senior Phase (n=12)	Frequency	Dimensions of Teachers' Work
	4. Confirming the correct answers to the questions in the assigned learning tasks.						
Conducting formal assessment.	This category of action includes the teacher administering the third term assessments.[75]		5	1	2	8	Assessing teaching outcomes
Marking learners' exercise books: Marking learners assigned learning tasks.	This category of action includes the teacher: 1. Marking learners' exercise books. 2. Providing verbal or written feedback. a. In foundation phase this includes putting a sticker for excellent work in learners' exercise books. b. In School C, the teachers have a rubber stamp of the word		2	5		7	Assessing teaching outcomes

[75] The fieldwork in School C coincided with the planned third term assessment in the Johannesburg Central Education district.

Categories of Actions	Description of Actions	Grade R (n=3)	Foundation Phase (n=20)	Intermediate Phase (n=19)	Senior Phase (n=12)	Frequency	Dimensions of Teachers' Work
	'INCOMPLETE" which they stamp in learners' exercise books when the assigned learning task is partially done.						
Affirming learners' good behaviour: Affirming learners who provide the correct answer and demonstrate progress and encouraging their peers to praise their colleague who perform well.	This category of action includes teachers: 1. Affirming learners who provide the correct answer, who show progress and who do something relatively remarkable. 2. Encouraging the class to acknowledge and celebrate the learners who show progress and who do something relatively remarkable.		3	2	2	7	Controlling classroom interactions

Categories of Actions	Description of Actions	Grade R (n=3)	Foundation Phase (n=20)	Intermediate Phase (n=19)	Senior Phase (n=12)	Frequency	Dimensions of Teachers' Work
Using LTSM for demonstrations: Demonstrating concepts using LTSM together with the textbook/DBE Workbook.	This category of action includes teachers: 1. Using counters to demonstrate division. 2. Using posters to assist with whole-class singing and counting 3. Using Lego bricks (six bricks) for honing listening skills and teaching frequency/bar graphs.	2	3			5	Delivering curriculum content
Authorising monitors: Authorising monitors to report on learners who are non-compliant with the teacher's instructions.	This category of action includes teachers: 1. Giving select learners the authority to monitor and report to the teacher the names of their peers who are non-compliant with the teachers' instructions.		3	2		5	Delivering curriculum content

Categories of Actions	Description of Actions	Grade R (n=3)	Foundation Phase (n=20)	Intermediate Phase (n=19)	Senior Phase (n=12)	Frequency	Dimensions of Teachers' Work
Permitting independent learning: Permitting learners to work independently on enrichment learning tasks.	This category of action includes teachers: 1. Encouraging learners in the foundation phase to read independently in the reading corner or to complete the DBE workbook on their own. 2. Encouraging learners to read the textbook in preparation for the next topic.		3		1	4	Permitting independent learning
Calling learners to prayer.	This category of action includes teachers and learners: 1. Praying at the beginning of the school day for a productive day. 2. Praying before learners leave the class for break for safety. 3. Praying at the end of the school day for a good day.		4			4	Controlling classroom interactions

Categories of Actions	Description of Actions	Grade R (n=3)	Foundation Phase (n=20)	Intermediate Phase (n=19)	Senior Phase (n=12)	Frequency	Dimensions of Teachers' Work
Oversimplifying content: Oversimplifying ideas and theories.	The category of action includes the teacher: 1. Reducing complex ideas and theories into a list of words with definitions that were not discussed.				4	4	Delivering curriculum content
Providing superficial examples: Providing examples from real life as self-explanatory without exploring and making explicit the underlying processes.	This category of action includes the teacher: 1. Using examples to reveal an underlying process without making the process explicit and assuming that learners will make deductions on their own about the underlying process from the examples.			1	3	4	Delivering curriculum content

Categories of Actions	Description of Actions	Grade R (n=3)	Foundation Phase (n=20)	Intermediate Phase (n=19)	Senior Phase (n=12)	Frequency	Dimensions of Teachers' Work
Assigning homework: Assigning learning tasks to be completed at home.	This category of action includes the teacher: 1. Instructing learners to complete the assigned learning tasks at home when they did not complete them during the lesson.		1		2	3	Delivering curriculum content
Permitting learners to work together: Allowing learners to complete a learning task with other learners.	The category of action includes the teacher: 1. Allowing learners to work in pairs to complete the assigned learning task. 2. Allowing learners to work in groups to complete the assigned learning task.			1	2	3	Delivering curriculum content
Keeping learners busy: Occupying learners with a familiar learning task.	The category of action includes the teacher: 1. Ensuring that learners are never left idle, that they are constantly occupied with a learning task such as completing an activity from the DBE workbook.		2	1		3	Controlling classroom interactions

Categories of Actions	Description of Actions	Grade R (n=3)	Foundation Phase (n=20)	Intermediate Phase (n=19)	Senior Phase (n=12)	Frequency	Dimensions of Teachers' Work
Asking learners to solve problems on the chalkboard.	The category of action includes the teacher: 1. Requesting learners to solve mathematical problems on the chalkboard.			1	2	3	Delivering curriculum content
Reminding learners of classroom protocols.	The category of action includes the teacher: 1. Reminding learners to adhere to classroom protocols. 2. Reminding learners to return books to set locations. 3. Reminding learners to put chairs on the desks at the end of the school day. 4. Reminding learners to enter the classroom only after receiving permission.		2	1		3	Controlling classroom interactions

Categories of Actions	Description of Actions	Grade R (n=3)	Foundation Phase (n=20)	Intermediate Phase (n=19)	Senior Phase (n=12)	Frequency	Dimensions of Teachers' Work
	5. Reminding learners to leave the classroom in an orderly manner – in a line.						
Giving feedback: Giving learners feedback on the learning tasks that they are completing (seat work).	The category of action includes the teacher: 1. Commenting on the assigned learning task that learners were completing on their own.		1	2		3	Assessing teaching outcomes
Presenting knowledge as a list of objective facts.	The category of action includes the teacher: 1. Omitting that ideas and theories are constructed and can be refuted or that there are alternative explanations. 2. Presenting social concepts as objective facts.			1	2	3	Delivering curriculum content

Categories of Actions	Description of Actions	Grade R (n=3)	Foundation Phase (n=20)	Intermediate Phase (n=19)	Senior Phase (n=12)	Frequency	Dimensions of Teachers' Work
Assigning remedial work: Giving underperforming learners additional worksheets as an intervention.	The category of action includes the teacher: 1. Providing underperforming learners with additional worksheets for more practice which are then stored in the learners' intervention files.			1	1	2	Assessing teaching outcomes
Reminding learners of previous learning.	The category of action includes the teacher: 1. Reminding learners of previously completed curriculum content.		1		1	2	Delivering curriculum content
Correcting learners' use of English.	The category of action includes the teacher: 1. Correcting learners use of a word in a sentence in English. 2. Correcting learners' pronunciation of a word in English.		1		1	2	Assessing teaching outcomes

Categories of Actions	Description of Actions	Grade R (n=3)	Foundation Phase (n=20)	Intermediate Phase (n=19)	Senior Phase (n=12)	Frequency	Dimensions of Teachers' Work
Giving incorrect explanations and information.	The category of action includes the teacher: 1. Providing learners with incorrect explanations and information.			1	1	2	Delivering curriculum content
Interpreting text: Interpreting text from the textbooks/DBE workbooks.	The category of action includes the teacher: 1. Interpreting written text in the prescribed textbooks/DBE workbooks.			1		1	Delivering curriculum content
Benchmarking performance.	The category of action includes the teacher: 1. Teachers showing learners examples of completed work by their peers to guide them in their own outputs.			1		1	Assessing teaching outcomes
Instructing learners to sleep.	The category of action includes the teacher: 1. Instructing learners to take a sleep break. Sleeping is an accepted activity in Grade R and foundation phase lessons.		1			1	Controlling classroom interactions

Categories of Actions	Description of Actions	Grade R (n=3)	Foundation Phase (n=20)	Intermediate Phase (n=19)	Senior Phase (n=12)	Frequency	Dimensions of Teachers' Work
Performing administration.	The category of action includes the teacher: 1. Handing out indemnity forms to learners for parents to complete for a forthcoming school excursion. 2. Handing out letters to learners informing parents about events taking place at the school. 3. Doing administration.		1			1	Performing administration
Permitting learners to present to the class: Allowing learners to present their completed learning tasks to the class.	The category of action includes the teacher: 1. Allowing learners to present their completed assigned task to the rest of the class.				1	1	Assessing teaching outcomes

Categories of Actions	Description of Actions	Grade R (n=3)	Foundation Phase (n=20)	Intermediate Phase (n=19)	Senior Phase (n=12)	Frequency	Dimensions of Teachers' Work
Notifying learners of forthcoming school events.	The category of action includes the teacher: 1. Sharing information about forthcoming school events with learners. 2. Reminding learners of forthcoming school events.				1	1	Performing administration

**Source: Author's analysis in MS Excel.*

APPENDIX D: SAMPLE TRANSCRIPT

Below is a transcript of a digitally-recorded interview with one of the principals.

Researcher: What inspires your teaching?

Principal: I am inspired when I see us making a difference as professionals and as educators in the lives of these kids. They have been entrusted to us with the hope and understanding that things will actually work and nothing else but to actually make a difference for them to know what is good and what is bad and what is out there for them. I am inspired when I see learners being able to express themselves with confidence, being able to speak about what is right to them. When they enjoy themselves and I get inspired to actually come back tomorrow and see them doing what we are supposed to be doing as professionals. Everybody else, teachers and everyone else comes secondary, their happiness is key and paramount to me. When I see them greeting me first thing in the morning. When I see them running to me, those Grade Rs when they greet me I know that there's life and I know that they are here. But when I see them timid and walking in a certain manner then I know that there might be things that are not right. I am happy when they glow. I get inspired because it means the correct things are happen[ing] where they are. They find meaning in coming to the school. I get inspired when they showcase what they are doing in class with educators because some of them are so open to an extent that they even tell me what they don't like about me. There is one boy in 7A he once said to me: Principal, I have got a problem with you? I said: With me, a grade 7 child? What is it? He said: When you talk to us you are very loud, you shout and I don't like people who shout at us. You see now I get inspired because they open up. I can reflect who I am from them so that I am open and they are open and this is exactly what I want them to be. Open for learning and open to assimilate whatever they can be.

Researcher: Anything else?

Principal: I am inspired when I see educators doing what they are supposed to be doing. Knowing why they are here and when they don't carry over issues from home and within the society, seeing them against all odds ensuring that they do. I am inspired when I see them going to greater heights to even purchase shoes and doing so many things for these learners. Teachers themselves saying that: This learner is from an uncaring family. But the care that they give to these learners inspires me. Well of course there are sometimes when I get disturbed when teachers are socially loafing, walking very slowly to the class, it says

something to me. I will call the educator and say: Mam, you don't look like yesterday, do you want to have a little space in the staffroom so that I can look after the class for you? Because I don't like it when they get into trouble by carrying over problems that they have from home when they come to class then they end up administering corporal punishment and then they regret that. I get inspired when they come back to me and they say: I will be taking learners on this particular day to a particular day; how do you help us Principal? That is basically why I'm here on a daily basis to ensure that the space is conducive for all educators and learners.

Researcher: I want to ask you, for you about teaching, what are the musts like if you had to do a lecture on teaching what would you tell a first year Wits student, what are the musts?

Principal: Love what you do and have passion for what you do. Plan your day. Know what is supposed to go in for the day. It doesn't necessarily mean that things will go according to your plan but revisit your plan from time to time. I always indicate to new recruits in my school to say that: I want you to enjoy every minute of your day but the only way that you can enjoy is to actually try and master, knowing that mastering will come with time. Know the subject that you are going to teach because that is the first confidence builder to you as an educator because anything else is secondary to your because teaching is the profession that you have been employed for and you have done it out of love. I want to believe that you are not doing this because of the rate of unemployment is high and there are no jobs, you are doing it because you love it and you are certified by High institutions to say that you can teach and you will be able to teach. I am going to support in whatever but primary to all is planning everything that you are going to do and having the correct policies and understanding and being open to learn from other colleagues. What I usually do is assign mentors and coaches to them and indicate to them that I am coming from a position where I was a subject advisor. I was advising educators on Mathematics practices to say what are the aims of teaching this subject. How do I make it exciting for learners and for them not to see it as something very difficult? If you can then win that technique you would love to be in class every day. I tell quite a number of them that: look, our profession nowadays we are at risk because the type of learners that we have. We have learners that are from child-headed families. We need you to somehow execute your pastoral responsibilities, caring for these learners, showing them that you care, showing them that you love them so that they can then open up to listen to you. Talk to them in a tone that you both agree in class to say that when things are like this, this is how they are supposed to be. Make good relations within the

school. Avoid being in cliques unnecessarily so. Avoid talking back unnecessarily and not facing the problem. Always open up because when you don't face or speak about a challenge it becomes a problem. We have challenges but we must not make challenges to be problems. Let's be open so that at the end of the day we have got one goal of ensuring that this innocent souls are really taught to be responsible people in the near future.

Researcher: What are the must nots?

Principal: Must not one: You should not just be absent unnecessarily, it is a must not. I am absent for the sake. You must not as an educator insult learners. You must not create disharmony within the institution. You must not go to class unprepared because you are not likely to achieve the goal for the day.

Researcher: Anything else? Ok, what are the maybes? This is what you must and this is what you must not do but there is also that grey area that you maybe allow it. What will you permit?

Principal: I permit people to do what they think is right, what makes you feel good and you would expect another person to do even if it's not in line with the rules. I am not actually saying that people should bend the rules. The rule might be this but it might actually be hamstringing what you are actually supposed to be doing in class. Maybe the maybe would be: Do what makes you feel good in the class and everywhere within the school. So, if it makes you feel good, I want to believe that you will be in the position to say: I was doing this not that I was bending the rules. I was doing this because I was thinking that it would actually assist or it worked somewhere and I thought it would also work in our school. The maybes would be I am doing this because I am not sure. But be sure all the time in whatever you're trying to do.

Researcher: Anything else?

Principal: I want educators to be free. I want learners to be free to do and not to be afraid to do as long as it makes you feel good do it, it's right. Somehow, it's right. If then it's not wrong at least you have got a reason why you were doing it. That is basically that. Be calm and don't talk back unnecessarily because it makes things not what you thought.

Researcher: Tell me, I have been watching the teachers and the children and I see that they use the blue books, the DBE books.

Principal: Oh yes.

Researcher: What do you think about it; I am curious because it's in the Foundation Phase and the Intermediate Phase.

Principal: I am propagating the usage of those books as the principal. I check the utilization of the books per term. What I like most about the DBE workbooks is that they are content-relevant and they can assist the teachers to pace themselves and their work. You are able to cover the ambit of work that is intended for that particular term. They give learners enough practice. They have their books, they can use them at home and they can use them in class, I am happy with the DBE workbooks. What I need to correct and I am correcting the teachers is that I don't want them to actually rely on them to an extent that now they use the textbook method and the workbook method. Now I don't want DBE workbooks defeating the planning. Teachers come not planning and then they just give the learners the workbooks and say be busy on the workbook. It's not a busy book. I don't want it to be a busy book, I want that when learners are given work from the DBE workbook it should be maybe for you trying to introduce a specific topic or for you trying to consolidate something or they may be used for you to actually present a lesson that you want to present for the day. I like them much because I know that practice makes perfect. It's not only about the qualitative teaching but it's also about the qualitative work that learners do. If they are doing those things they are having enough practice and they would definitely cover what they would be tested on.

Researcher: Anything else that you want to talk about the DBE workbooks?

Principal: That is when parents don't actually look at them because these books are actually taken home by learners. I encourage parents to actually sign on the DBE workbook because it's value for money. It's a lot of money that has been spent on those books so if they are not utilised it really defeats the intention of making things available. But I don't want them to replace textbooks. Because DBE workbooks are only asking questions that are maybe relevant to CAPS only because they are stringently CAPS compliant but a textbook might be broad and might allow other expanded opportunities to say that a textbook might actually give a child to do something of another level but DBE workbooks are at a certain level that is to assist every learner to be in a position to do the work that is given in class. Basically, I don't want them to replace textbooks, I would prefer to have a textbook and a DBE workbook because DBE workbooks don't necessarily at all times explain or not explicit about the content of every topic. But textbooks at least somewhere have got those clues to guide that these are the keywords to guide this particular topic that you would look at.

Researcher: What makes teaching difficult?

Principal: Ill-disciplined learners. Ill-discipline in the classroom becomes very difficult when you are supposed to start working on discipline it makes it very difficult. Teaching becomes very difficult when there are a set of rules that do not give you room to be yourself and do the best that you have.

Researcher: Give me an example.

Principal: An example is if you are always told how to do things not being given freedom to explore and do things with your learners. When systems are not in place. When structures are not in place it makes teaching very difficult because now you concentrate on what was supposed to be rather than what you are actually supposed to be doing in class.

Researcher: Any other things that make it difficult?

Principal: When you do not have the required support from the department and from stakeholders and from the SGB. Specifically from the SGBs when they don't know their role they actually want to interfere with management and what teachers are supposed to be doing. When there is a lot of interference it makes it difficult. And when teachers are not allowed to consult with one another it makes it difficult for them and it makes teaching difficult. But basically when stakeholders do not support your course things become difficult because you feel that you are alone on your own in what you are doing.

Researcher: And what makes it easy?

Principal: When all that is supposed to be is in place.

Researcher: The opposite.

Principal: When all that is supposed to be is in place and orderly and you said what makes it…

Researcher: Easy. What are the facilitating factors?

Principal: That makes it easy. When you are respected in within your space it makes things easy for you. When you are given time to do your work. When the unnecessary activities that are disturbing your programme…When communication is at the correct level, basically when communication is at a correct level. When you are consulted on matters you don't see yourself at any given time your learner is taken out of the classroom when you have planned to do something, you are consulted on matters. You are respected; it makes your life easy at

school. It makes you enjoy what you are doing. When there are briefing to be told what disturbances will be there or when you are told in time about your workshops and when management plans are put there for you knowing quite well that submissions will happen on this particular day, it makes your life easy because you know that now and you are not told today for today.

Researcher: Correct.

Principal: You are told in time. There is a system and there is a plan that says when there are timetables I know that at this particular time I must be at this particular place it makes things easy for me.

Principal: I have asked you everything that I wanted to ask you.

Principal: Let's go on, I am enjoying this.

Researcher: You tell me what I haven't asked you. I am going to be honest, my interest is in the general feelings of our educators because I think that we are talking of curriculum and we are talking of assessments and we're talking about management, I am talking of the discourse, you know, the big debates out there about resources. No one is telling us how an ordinary teacher feels and that is what I am interested in. I only asked you questions about things that matter. And how often does someone come and say, what makes it easy for your work.

Principal: It is usually said that an observed behaviour is usually exhilarated. When you show love and interest in what teachers do, it makes them want to do more. When you appreciate, it's good and they want their work to be appreciated. They want to see that whatever they are doing, parents give them a report and they get a good rapport for what they are doing. They are open and they feel good when they are being told about their mistakes in a manner that is very welcoming. Those are things that I would say if I were supposed to be in class as a teacher and not as a principal, I would enjoy it most if I work in an orderly environment where things are not only done by the book but we interpret things together and make sense that is suitable to the context that we find ourselves in. So that if we are relevant to the context … be relevant to our course because we are relevant to the context then we will also be relevant to our course. We may not find that now this is what is expected of you and you are doing the other thing. Your expectations and what is expected should actually be synchronised for you to be doing it correct.

APPENDIX E: CUMULATIVE INSTITUTIONAL STATEMENTS

Table 8: Institutional statements in descending order of frequency of mentions by school, type of institution-in-use and deontic.

Number	Institutional Statements	Total	School A	School B	School C	Boundary	Position	Choice	Information	Aggregation	Payoff	Scope	Must Dos	Must Not Dos	May Dos	Dimensions of Teachers' Work
1.	Teachers must not administer corporal punishment to learners or else they will be charged with assault by the police and may lose their job.	18	3	7	8							1		1		Controlling classroom interactions.
2.	Teachers must be prepared for lessons so that they can manage learners to deliver the curriculum at the required pace or else they will be sanctioned by their head of department and district subject advisors for noncompliance with the prescriptions of the CAPS.	17	3	5	9	1							1			Delivering curriculum.
3.	Teachers must ensure that all learners understand all the objectives of the lessons that they deliver.	12	3	6	3							1	1			Assessing teaching outcomes.
4.	Teachers must be strict with learners for learners to respect their authority.	8	1	1	6	1							1			Controlling classroom interactions.
5.	Teachers must design transparent lesson plans with clear aims and objectives.	7	2	3	2				1				1			Delivering curriculum content.

Number	Institutional Statements	Total	School A	School B	School C	Boundary	Position	Choice	Information	Aggregation	Payoff	Scope	Must Dos	Must Not Dos	May Dos	Dimensions of Teachers' Work
6.	Teachers must use multiple teaching strategies to accommodate learners who grasp concepts quicker to those who are slower.	7	2		5					1			1			Delivering curriculum content.
7.	Teachers must not verbally abuse learners because it will have a negative impact on learners.	7	2	1	4							1				Controlling classroom interactions.
8.	Teachers must love the teaching profession or else they will find it difficult to teach.	6	0	4	2						1					Controlling teachers' conduct.
9.	Teachers must know learners' backgrounds to build a positive relationship with them.	6	3		3				1				1			Controlling classroom interactions.
10.	Teachers must not use foul language in the classrooms.	6		2	4			1						1		Controlling classroom interactions.
11.	Teachers may administer some form of punishment for ill-discipline barring corporal punishment or else learners will not understand consequences of their behaviour.	6		3	3							1			1	Controlling classroom interactions.

Number	Institutional Statements	Total	School A	School B	School C	Boundary	Position	Choice	Information	Aggregation	Payoff	Scope	Must Dos	Must Not Dos	May Dos	Dimensions of Teachers' Work
12.	Teachers must not show favouritism among learners.	6		6								1		1		Controlling classroom interactions.
13.	Teachers must not shout or scream at learners because it will have a negative impact on learners.	5	1	3	1							1		1		Controlling classroom interactions.
14.	Teachers may shout at learners.	5		2	3							1			1	Controlling classroom interactions.
15.	Teachers must respect and care for learners.	4		2	2							1	1			Controlling classroom interactions.
16.	Teachers must be patient.	4	1	1	2	1							1			Controlling classroom interactions.
17.	Teachers must know the subject content knowledge they teach.	4	2	1	1	1							1			Teaching competencies.
18.	Teachers must do reading in the classroom to ensure that all learners can read.	4	2		2			1					1			Delivering curriculum content.

Number	Institutional Statements	Total	School A	School B	School C	Boundary	Position	Choice	Information	Aggregation	Payoff	Scope	Must Dos	Must Not Dos	May Dos	Dimensions of Teachers' Work
19.	Teachers must start a lesson or new topic by getting to know learners' prior knowledge.	4		3	1			1					1			Delivering curriculum content.
20.	Teachers must mark learners work and provide timeous feedback to them.	4	1		3							1	1			Assessing teaching outcomes.
21.	Teachers must use multiple content resources including those available on the internet in planning lessons.	4	3		1					1			1			Delivering curriculum content.
22.	Teachers must make learning fun.	4	1	2	1					1			1			Delivering curriculum content.
23.	Teachers must lead by example.	4		1	3	1							1			Teaching outcomes.
24.	Teachers must do writing in the classroom to ensure that all learners can write.	3	2	1				1					1			Controlling teachers' conduct.
25.	Teachers must translate and deliver the curriculum.	3	1		2		1						1			Delivering curriculum content.

Number	Institutional Statements	Total	School A	School B	School C	Boundary	Position	Choice	Information	Aggregation	Payoff	Scope	Must Dos	Must Not Dos	May Dos	Dimensions of Teachers' Work
26.	Teachers must manage lesson time to accommodate slow learners and comply with the prescribed pace of curriculum delivery.	3	1	1	1					1			1			Delivering curriculum content.
27.	Teachers must establish classroom rules.	3	1	1	1							1	1			Controlling classroom interactions.
28.	Teachers must not destroy learners' confidence.	3	2		1							1		1		Teaching outcomes.
29.	Teachers must manage their temper during school hours.	3			3	0		1					1			Controlling teachers' conduct.
30.	Teachers must complete the observation book on learners' performance and behaviour.	3	1		2				1				1			Assessing teaching outcomes.
31.	Teachers must attend school regularly.	4			4	1							1			Controlling teachers' conduct.
32.	Teachers must foster collegial relationship with colleagues.	2			2							1	1			Controlling teachers' conduct.

Number	Institutional Statements	Total	School A	School B	School C	Boundary	Position	Choice	Information	Aggregation	Payoff	Scope	Must Dos	Must Not Dos	May Dos	Dimensions of Teachers' Work
33.	Teachers must follow a routine and be consistent in applying classroom rules	2	1		1			1					1			Controlling classroom interactions.
34.	Teachers must have a preparation file.	2		1	1				1				1			Delivering curriculum content.
35.	Teachers must reflect on the effectiveness of their lesson plans.	2		2						1			1			Delivering curriculum content.
36.	Teachers must praise and give positive comments to learners.	2		2								1	1			Controlling classroom interactions.
37.	Teachers must plan short lessons in Foundation Phase.	2	2							1			1			Delivering curriculum content.
38.	Teachers must know learners' capabilities in academic, sporting and cultural curriculum.	2	2						1				1			Assessing teaching outcomes.
39.	Teachers must create a conducive learning environment in their classrooms.	2	1		1			1					1			Controlling classroom interactions.

Number	Institutional Statements	Total	School A	School B	School C	Boundary	Position	Choice	Information	Aggregation	Payoff	Scope	Must Dos	Must Not Dos	May Dos	Dimensions of Teachers' Work
40.	Teachers must build a positive relationship with learners' parents to keep them informed and involved in their child's progress at school.	2	1		1							1	1			Interacting with parents.
41.	Teachers must reason with learners in ways that enhance transparency and democracy in the classroom.	2			2			1					1			Controlling classroom interactions.
42.	Teachers must be flexible so that they can be more responsive to changing classroom dynamics.	2		1	1	1							1			Controlling teachers' conduct.
43.	Teachers must work as a team with colleagues.	2	1		1							1	1			Controlling teachers' conduct.
44.	Teachers must maintain a professional relationship with learners.	2		1	1							1	1			Controlling teachers' conduct.
45.	Teachers must be creative and innovative.	2			2	1							1			Teaching competencies.
46.	Teachers must focus more on 'slow learners'.	2		1	1			1					1			Delivering curriculum content.

Number	Institutional Statements	Total	School A	School B	School C	Boundary	Position	Choice	Information	Aggregation	Payoff	Scope	Must Dos	Must Not Dos	May Dos	Dimensions of Teachers' Work
47.	Teachers must inspire learners to reach their full potential.	2			2							1	1			Teaching outcomes.
48.	Teachers must listen to learners.	2	2					1					1			Controlling classroom interactions.
49.	Teachers must be punctual in school attendance.	4			4	1							1			Controlling teachers' conduct.
50.	Teachers must keep the learners occupied throughout the lesson.	2		1	1			1					1			Controlling classroom interactions.
51.	Teachers must reward learners for their achievements.	2		2				1					1			Controlling classroom interactions.
52.	Teachers must ensure that learners know the vocabulary of a new topic.	2	1	1								1	1			Teaching outcomes.
53.	Teachers must provide practical examples that relate to learners' real-life experiences.	2		1	1			1					1			Delivering curriculum content.

Number	Institutional Statements	Total	School A	School B	School C	Boundary	Position	Choice	Information	Aggregation	Payoff	Scope	Must Dos	Must Not Dos	May Dos	Dimensions of Teachers' Work
54.	Teachers must ensure that learners participate in their learning and that they are responsible for their own learning.	2		2								1	1			Delivering curriculum content.
55.	Teachers must not make negative comments to learners.	2	1	1								1		1		Controlling classroom interactions.
56.	Teachers must not get personal with learners.	2		2								1		1		Controlling classroom interactions.
57.	Teachers must not intimidate learners.	2	2									1		1		Controlling classroom interactions.
58.	Teachers may showcase a cane as a potential threat to corporal punishment.	2			2							1			1	Controlling classroom interactions.
59.	Teachers must talk about the challenges that they face at school with colleagues to mitigate stress.	1		1					1				1			Controlling teachers' conduct.
60.	Teachers must be aware of the causes for learners' misbehaviour.	1			1				1				1			Controlling classroom interactions.

Number	Institutional Statements	Total	School A	School B	School C	Boundary	Position	Choice	Information	Aggregation	Payoff	Scope	Must Dos	Must Not Dos	May Dos	Dimensions of Teachers' Work
61.	Teachers must submit administration tasks timeously.	1			1							1	1			Performing administration.
62.	Teachers must be curious.	1		1		1							1			Competencies of a teacher.
63.	Teachers must avoid creating and participating in cliques.	1		1								1	1			Controlling teachers' conduct.
64.	Teachers must be committed to lifelong learning.	1			1	1							1			Competencies of a teacher.
65.	Teachers must earn learners' respect.	1		1								1	1			Controlling classroom interactions.
66.	Teachers must be fit and healthy.	1			1	1							1			Teaching competencies.
67.	Teachers must receive strong family support.	1		1							1		1			Teaching competencies.
68.	Teachers must make learning meaningful to learners.	1			1							1	1			Teaching outcomes.

Number	Institutional Statements	Total	School A	School B	School C	Boundary	Position	Choice	Information	Aggregation	Payoff	Scope	Must Dos	Must Not Dos	May Dos	Dimensions of Teachers' Work
69.	Teachers must use flashcards in the Foundation Phase.	1	1					1					1			Delivering curriculum content.
70.	Teachers must do counting in the Foundation Phase.	1	1					1					1			Delivering curriculum content.
71.	Teachers must know how to teach.	1		1		1							1			Teaching competencies.
72.	Teachers must have access to the necessary LTSM.	1		1						1			1			Delivering curriculum content.
73.	Teachers must ensure that learners are happy in the classroom.	1		1								1	1			Controlling classroom interactions.
74.	Teachers must use 'reverse psychology' on learners to maintain their cooperation.	1		1				1					1			Controlling classroom interactions.
75.	Teacher must participate in extracurricular activities at the school.	1			1							1	1			Participating in extracurricular activities.

Number	Institutional Statements	Total	School A	School B	School C	Boundary	Position	Choice	Information	Aggregation	Payoff	Scope	Must Dos	Must Not Dos	May Dos	Dimensions of Teachers' Work
76.	Teachers must use multiple LTSM in lessons.	1	1	1						1			1			Delivering curriculum content.
77.	Teachers must comply with the CAPS.	1			1				1				1			Delivering curriculum content.
78.	Teachers must be able to control their classroom.	1		1		1							1			Controlling classroom interactions.
79.	Teachers must make the learning outcomes clear to learners.	1		1						1			1			Delivering curriculum content.
80.	Teacher must ensure that learners are able to apply their learning.	1		1								1	1			Assessing teaching outcomes.
81.	Teachers must benchmark their work against their colleagues to ensure that they are on par.	1		1					1				1			Delivering curriculum content.
82.	Teachers must ensure learners achieve academic success.	1		1								1	1			Teaching outcomes.

Number	Institutional Statements	Total	School A	School B	School C	Boundary	Position	Choice	Information	Aggregation	Payoff	Scope	Must Dos	Must Not Dos	May Dos	Dimensions of Teachers' Work
83.	Teachers must ensure learners achieve social success.	1		1								1	1			Teaching outcomes.
84.	Teachers must accommodate learners who cannot read/write in the lesson.	1		1				1					1			Delivering curriculum content.
85.	Teachers must repeat and revise all topics.	1	1					1					1			Delivering curriculum content.
86.	Teachers must teach during the lessons.	1			1			1					1			Controlling teachers' conduct.
87.	Teachers must promote human rights in the classroom.	1			1			1					1			Controlling classroom interactions.
88.	Teachers must spell correctly on the board.	1	1					1					1			Delivering curriculum content.
89.	Teachers must not be intoxicated during school hours.	1			1	1								1		Controlling teachers' conduct.

Number	Institutional Statements	Total	School A	School B	School C	Boundary	Position	Choice	Information	Aggregation	Payoff	Scope	Must Dos	Must Not Dos	May Dos	Dimensions of Teachers' Work
90.	Teachers must not do administration.	1			1							1		1		Performing administration.
91.	Teachers must not mismanage school funds.	1			1			1						1		Controlling teachers' conduct.
92.	Teachers must not be on their mobile phone during teaching time.	1			1			1						1		Controlling teachers' conduct.
93.	Teachers must not be unkind to learners.	1			1							1		1		Controlling classroom interactions.
94.	Teachers must not be in a romantic relationship with learners.	1			1							1		1		Controlling teachers' conduct.
95.	Teachers must not eat during a lesson.	1		1				1						1		Controlling teachers' conduct.
96.	Teachers must not give 'fake' marks.	1	0	0	1							1		1		Assessing teaching outcomes.

Number	Institutional Statements	Total	School A	School B	School C	Boundary	Position	Choice	Information	Aggregation	Payoff	Scope	Must Dos	Must Not Dos	May Dos	Dimensions of Teachers' Work
97.	Teachers must not be rude parents.	1			1							1		1		Interacting with parents.
98.	Teachers must not make inappropriate comments in learners' exercise books.	1			1							1		1		Controlling teachers' conduct.
99.	Teachers must not shirk their given responsibilities in the school.	1			1							1		1		Controlling teachers' conduct.
100.	Teachers must not compare learners publicly.	1			1							1		1		Controlling teachers' conduct.
101.	Teachers must not work alone in isolation from their colleagues.	1	1						1					1		Controlling teachers' conduct.
102.	Teachers must not provide learners with answers during an examination.	1			1							1		1		Assessing teaching outcomes.
103.	Teachers must not behave unprofessionally.	1		1		1								1		Controlling teachers' conduct.

Number	Institutional Statements	Total	School A	School B	School C	Boundary	Position	Choice	Information	Aggregation	Payoff	Scope	Must Dos	Must Not Dos	May Dos	Dimensions of Teachers' Work
104.	Teachers must not think that they know everything.	1			1	1								1		Controlling teachers' conduct.
105.	Teachers must not think that they are always right.	1			1	1								1		Controlling teachers' conduct.
106.	Teachers must not create disharmony in the school.	1		1								1		1		Controlling teachers' conduct.
107.	Teachers must do corrections with learners on assigned tasks.	1		1								1	1			Assessing teaching outcomes.
108.	Teachers must not accommodate negativity.	1		1				1						1		Controlling teachers' conduct.
109.	Teachers must not give up on learners.	1	1									1		1		Controlling classroom interactions.
110.	Teacher must not plan too long lessons.	1	1							1				1		Delivering curriculum content.

Number	Institutional Statements	Total	School A	School B	School C	Boundary	Position	Choice	Information	Aggregation	Payoff	Scope	Must Dos	Must Not Dos	May Dos	Dimensions of Teachers' Work
111.	Teachers must not give examples that are not in the curriculum.	1		1								1		1		Delivering curriculum content.
112.	Teachers may allow learners another opportunity to sit for an exam that they were absent for.	1	1									1			1	Assessing teaching outcomes.
113.	Teachers may manipulate the assessment regimen to allow learners to maximise their overall marks.	1			1							1			1	Assessing teaching outcomes.
114.	Teachers may help learners with completing an assessment task	1			1							1			1	Assessing teaching outcomes.
115.	Teachers may be empathetic to learners who have difficulties at home.	1			1	1									1	Controlling classroom interactions.
116.	Teachers may go the extra mile in their responsibilities at school.	1	1									1			1	Controlling teachers' conduct.
117.	Teachers may participate in extracurricular activities offered at the school.	1			1							1			1	Participating in

Number	Institutional Statements	Total	School A	School B	School C	Boundary	Position	Choice	Information	Aggregation	Payoff	Scope	Must Dos	Must Not Dos	May Dos	Dimensions of Teachers' Work
																extracurricular activities.
118.	Teachers may occasionally have fun in the classroom.	1		1				1							1	Controlling classroom interactions.
119.	Teachers may speak to someone (including a colleague) when they are frustrated to help them manage their temper in the classroom.	1			1				1						1	Controlling teachers' conduct.
120.	Teachers may bend the rules for the greater good.	1		1						1					1	Controlling teachers' conduct.
121.	Teachers may engage with parents in non-judgemental ways and need to be diplomatic.	1		1								1			1	Interacting with parents.
122.	Teachers may use caning to sanction learners for ill-discipline as a last resort.	1	1									1			1	Controlling classroom interactions.
123.	Teachers may tolerate late attendance by learners if it is an occasional occurrence.	1		1								1			1	Controlling classroom interactions.

Number	Institutional Statements	Total	School A	School B	School C	Boundary	Position	Choice	Information	Aggregation	Payoff	Scope	Must Dos	Must Not Dos	May Dos	Dimensions of Teachers' Work
124.	Teachers may tolerate incomplete work by learners if it is an occasional occurrence.	1		1								1			1	Assessing teaching outcomes.
125.	Teachers may get to know learners and build a positive relationship.	1			1				1						1	Controlling classroom interactions.
126.	Teachers may get attached to learners.	1			1							1			1	Controlling classroom interactions.

**Source: Author's categorisation.*

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