Understanding teachers' experiences of work in marketised contexts:

A scale construction approach

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Abstract

The aim of this research was to study the experiences of teachers working in marketised contexts to understand the effect on their work. For-profit education management organisations are increasing their involvement in all facets of education and the influences of marketisation may be particularly evident in the growing sector of international schools. The problem addressed in this research is the difficulty understanding the experiences of teachers in marketised contexts. This may be especially difficult as teachers' perceptions are unheard when market-based reforms are assumed to solve all issues.

The feminist critical approach to mixed-methods scale development in this research treated teachers' experiences and perceptions as the starting point for knowledge creation. Teachers' input was integrated at each stage of methods. The outcome was both quantitative results suitable for policy audiences and personal stories from teachers. Data was collected through interviews with teachers working in for-profit schools and a questionnaire administered to teachers working in many different types of schools. Mokken scale analysis, Rasch analysis and path analysis were used for instrument development, measurement model creation and to investigate the relationships between the constructed scales.

The findings of this study were the four main themes: Marketisation, fulfilment, buffering and control. The marketisation theme split into two scales: the pattern of experiences of business influences on teachers' work and teachers' perceptions of the extent to which their school is run as an EduBusiness. The fulfilment teachers feel in their work and buffering from business influences combined into a single scale. Teachers' feelings of a lack of control over their work created the final scale.

The four constructed scales were found to all be significantly related to each other. The final path analysis predicted 68% of the variance in teachers' feelings of a lack of control over their work based on direct predictors of the business influences on teachers' work and teachers' feelings of fulfilment and buffering from business influences. The indirect predictor was teachers' perceptions of the extent to which their school was run as an EduBusiness.

The contribution of this research is understanding the patterns of the marketisation of schools and seeing that the effect on teachers is consistent for teachers in many kinds of schools, not only international or for-profit schools. The feminist critical mixed-methods approach used to integrate teachers' perceptions with quantitative analysis open new possibilities for mixed-methods and critical analysis in the future.

Keywords: teachers' work, marketisation, feminist critical analysis, mixed-methods, Rasch, path analysis

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Chapter 1: Introduction

This research is a scale construction approach to understanding teachers' work in marketised contexts. The reason I chose to undertake this research was from my own experiences as a teacher and researcher. After describing my own connection to the research, I will explain the aims, objectives and questions that framed this research. I will then discuss how viewing school as a workplace for teachers is important to the research, introduce marketisation's effect on schools and teachers, and describe the context of international schools. The problem statement and a brief introduction to the methods that will be used to answer the research questions conclude this chapter.

The aim of the introduction is to describe the context of the research and to introduce the research questions and the methods used to investigate them. However, I will begin with my own experience. Throughout this investigation, the experiences and perceptions of teachers guided each step and my own experience as a teacher initiated this research.

My Relationship to this Research

My interest in this research came from my experience as a teacher. Previous experience working in public schools, a family-owned private for-profit international school and a school run by a for-profit educational management organisation led to me researching the experiences of teachers in different contexts. I completed my teacher education in the United States and taught three years in the public school system in Salem, Oregon. I had always been interested in living abroad and took a job working in Kuwait for a private, for-profit school. The experience was strange and incredible. While the school was owned by a family that made a profit from the

school's operation, I felt it was philosophically driven by educational aspiration above all other motivations due to the school's origin as one of the first institutions preparing Kuwaiti students to attend English language universities. Most of the staff were experienced American and Canadian teachers who had been educated in public schools and I felt the teachers brought that ethos to the school. While the commercial aspect of the school was evident in many small ways, I rarely noticed it. The expensive cars of the owners were parked next to the front door. The school underwent a re-branding campaign intended to modernise their advertisements and website. The school's facilities were rented out on the weekends, so a frustrating part of my work was to pack up my classroom which served as the green room for the auditorium. However, these parts of my teaching experience felt like a few strange additions to an overall normal teaching job. They were small nuisances compared to the great colleagues, the excellent school administrators and fabulous professional opportunities I had. Overall, I was very comfortable working in the school even though private and for-profit schools were not well known to me. After 4 years in Kuwait, I changed jobs, moving countries to take a position in a school run by the one of the world's largest international for-profit education management organisations. Consequently, my work life changed dramatically.

I expected that working for a 'corporate' school would be different from both my public and previous private school teaching experiences, but the change was an absolute shock. I was prepared for the stereotypes of corporate management like more 'management-ese' to be spoken, an increase in team building events, or pressure to wear company branded attire, but the change was not at all what I expected. The school did not feel like an education institution and I did not feel like a teacher. My previous teaching experience did not seem to apply to the situations I was

encountering. My philosophy of teaching, of learning and of collegiality seemed dissonant with the school and made me vulnerable to criticism of not being a 'good fit'. Unlike the small strange aspects of my previous for-profit school, significant aspects of the work seemed altered by the nature of the school. There was something I could not describe that permeated every aspect of the experience for me. During my time teaching, I accepted changes in my own behaviour I did not like and was increasingly less surprised by how teachers and school administrators negotiated the school context through competition and exclusion. While the students' experiences may have been very similar to other schools, there was still something palpably different to other schools that affected teachers' work in that school. Although I evolved to negotiate the context, I never fully felt like a teacher. I decided to exit the school and the teaching profession, leaving behind what had previously felt like my calling.

If there is anything positive to be gained from my two years in that position, it was realising that there was a phenomenon in these schools that needed to be researched. I realised the importance of finding out how the context of schools affects the work of teachers. In my experience, some teachers unproblematically fit into the for-profit school, but that made me even more curious. What was different? Why did some teachers seem to thrive, while a significant number felt the need to run away? The school I worked for had a 36% teacher turnover rate when I left and has had around a 20% turnover rate every year since then (KHDA, 2019). How could it be considered an excellent school for students when teachers were continuously leaving? Was high turnover of teachers simply how market forces worked to ensure great education? I did not understand at the time, but I felt the need to find out. Judging the school from its own marketing, the perceptions of students or parents would yield

very different answers to the question of 'what is occurring?'. Unfortunately, parents' or students' perceptions may not fully uncover the phenomenon. Teachers experience schools very differently from other stakeholders and, arguably, their work is a key aspect of how schools can be understood. The questions I had about teachers' experiences and my belief that teachers' perceptions may answer them led me to a feminist perspective.

I position my approach to this research firmly within a feminist perspective and the analysis begins at the perceptions of teachers and their experiences. Rather than seeking an outsider view, this feminist perspective "seeks a rationality not divided from experience, from oppression, from particularity or specificity; a reason, on the contrary, that includes them [participants like teachers] is a rationality not beyond or above experience but based upon it" (Gross, 1986, p. 203). With origins in my experience and training, this research is based on the experiences of teachers who participated in the research. While my own experience in for-profit schools may seem to make an outsider view difficult, being a member of a group does not automatically create sameness and not being a member does not denote complete difference (Dwyer & Buckle, 2009, p. 60). Furthermore, rejecting insider views and judging schools on only objective measures like exam results or profitability may be the reason that we are not well informed about the actual experiences of teachers within for-profit schools. Feminist thinkers reject the assumption that an outsider's view should be used to research the experiences of people, stating that it is not productive to "de-stance" (Sturges, 2014) research. Sturges (2014) argues that de-stancing forces researchers "to mask their political agendas and stances as they produce contractually agreed-upon knowledge" (p. 273) narrowing the possibilities of discovering new information and serving only to further solidify "tropes defined by convention" (p.

283). Relying on objective data or analysing from a de-stanced position shackles the researcher to a context rather than allowing the context itself to be investigated. When research claims to have no standpoint, the position of the researcher is not truly objective, it is simply that their standpoint is unacknowledged or not discussed. Understanding the experiences of teachers based on their own perceptions of their work with a feminist approach to research methods transparently acknowledges my own experience and my involvement in the topic. The aims and objectives are chosen with teachers' perceptions in mind and my own methods expertise frame how the research is conducted.

Research Aim and Objectives

The aim of this research is to understand the experiences of teachers working in marketised contexts through the process of scale construction. The objectives are to (1) listen to the perceptions of teachers working in for-profit international schools run by large multi-national education management organisations; (2) to analyse their stories to understand the range of experiences; (3) to create items that reflect the themes of their stories; (4) to test the patterns with quantitative methods of scale construction; and (5) to relate these measures back to teachers' stories of their work.

Research Questions

The decision making throughout this research was framed by a feminist approach. With the focus on teachers' experiences, the specific research questions were not decided ahead of listening to teachers' perceptions about their work. With the aim of understanding the experiences of teachers working in marketised contexts, the primary question of this research is: How do teacher's experience their work in

marketised contexts? However, the specific research questions were finalised in the process of data analysis. For feminist researchers, there is a struggle around when questions, definitions and labels should be conceived when formulating research. Deciding the exact questions ahead of time involves the researcher labelling participants' experiences before the participants are involved in the research. While waiting and allowing the research to frame the questions may weaken the researcher's claims of objectivity (Westmarland, 2001, p. 16), deciding the specific questions later fit the overall approach of the research. The interviews were approached with only a general idea of understanding teachers' experiences through discussing marketisation, teachers' control over their work, their input into decision making and their feelings about their work. The research questions were initially conceived after teachers were interviewed about their experiences, refined after the pilot questionnaire and finalised at the conclusion of the Rasch analysis (Rasch, 1960). Rasch theorists agree that, if questions and items are finished before interaction with participants, then the research is "closing off the possibility that the questions might be improperly posed, and that indications of an answer might actually be received from another direction" (Fisher, 1991, p. 3). Wright (1977) describes the process for Rasch analysis that "to arrive at a workable position, we must invent a simple conception of what we are willing to suppose happens, do our best to write items and test persons so that their interaction is governed by the conception and then impose its statistical consequences upon the data to see if the invention can be made useful" (Wright, 1977, p. 97). Allowing flexibility in the research questions tuned the investigation to the experiences of the participants without pre-conceived notions or stereotypes about their perceptions.

The research questions were finalised to be worded in accordance with each theme that was developed into a scale. The terms *buffering, fulfilment, EduBusiness*

and *marketisation* are further described in Chapter 3 as part of the scale construction process. The fundamental question of 'what are the experiences of teachers working in marketised contexts?' was broken down into answerable parts:

1. What teacher experiences indicate the level of business influences on teachers?
    1a. What are the psychometric properties of this scale?
    1b. What idiosyncrasies of items and respondents were found for this scale?
    1c. What is the pattern of experiences of business influences?

2. What teacher experiences indicate how running a school like an EduBusiness is evident in teachers' work?
    2a. What are the psychometric properties of this scale?
    2b. What idiosyncrasies of items and respondents were found for this scale?
    2c. What is the pattern of experiences of an EduBusiness?

3. What teacher experiences indicate teachers' fulfilment and their buffering from marketisation influences?
    3a. What are the psychometric properties of this scale?
    3b. What idiosyncrasies of items and respondents were found for this scale?
    3c. What is the pattern of experiences of fulfilment and buffering?

4. What teacher experiences indicate lack of control over their work?
    4a. What are the psychometric properties of this scale?
    4b. What idiosyncrasies of items and respondents were found for this scale?
    4c. What is the pattern of experiences of lack of control?

5. What are the relationships between these scales?

Research Context

The three important components of the context of this research that require discussion are schools as a workplace for teachers, the relationship of marketisation to the work of teachers, and international schools as a prime context in which to research teachers' experiences of marketisation.

School as a workplace for teachers. Connell (1985) states it outright: "Teachers are workers, teaching is work, and the school is a workplace. These simple facts are often forgotten" (p. 69). She suggests that the difficulty in identifying teaching as work may be because teaching creates intangible things as "a great deal of work is done in schools, day in and day out, but this work does not produce any

things" (p. 70). When the product of education is intangible, teachers' work becomes difficult to see in a measurable way except through students' results. Viewing education as the means to students' outcomes, job training or future economic productivity can make it easy to forget that teachers are a vital component of the education system, that their work conditions matter, and that students' outcomes can be considered a by-product of teachers' engagement in working. Acker (1999) points out that the focus on students takes attention away from teachers when "we are so obsessed with schools as places for children that we forget they are workplaces for adults" (p. 197). She describes the irony that teachers' work is both seen as the key ingredient for students' learning and frequently disregarded. Biesta (2013) describes the phenomenon as "learnification" when learning is seen as separate from teaching, removing teachers from the equation. While learning may happen in other places, teaching primarily happens inside schools (Biesta, 2013). Schools are not simply a learning environment for students but "also a workplace for its teachers . . . this workplace is structured through resources and relationships which can make the job easier or harder, fruitful or futile, rewarding or dispiriting" (Hargreaves, 1994, p. 13). However, schools are more than simply buildings, they are "not the neutral backdrop for education, but always embody particular educational ideas, practices, and traditions, and therefore influence what can be done and what cannot be done" (Biesta, 2011, p. 202). Looking at school as a workplace for adults, and therefore, a social context, gives new insights into understanding education. Choosing to view "school as a workplace proves extraordinarily powerful . . . the prevailing pattern of interactions and interpretations in each building demonstrably creates certain possibilities and sets certain limits" (Little, 1982, p. 338). The importance of seeing teachers as workers and schools as workplaces opens the *black box* of education

beyond judging inputs and outcomes. Schools can be researched as organisations that affect how workers in that context function. In this research, the marketisation of schools and the implications for teachers' experiences are the focus.

Marketisation and schools. For advocates of creating a market for schools, market forces "will unleash the drive, imagination, and energy of competitive free enterprise to revolutionize the education process" (Friedman, 1997, p. 341). The principles of competition, efficiency and accountability structural conditions of a market reinforce principles of rationality, efficiency and accountability. In schools, the conditions of a market are then believed to boost student and school performance as well as the overall quality of education through competition and consumer sovereignty (Aurini, 2006, p. 93). Public schools are described as being "organised for compliance and employee protection rather than performance and have little incentive to scale successful models [while] for-profit organisations have strong incentives to satisfy customers and achieve scale" (Vander Ark, 2012, p. 200). The expectation is that "unbundling" traditional educational practices through innovative marketisation solutions will "cultivate a flexible system that emphasizes performance, rewards success, addresses failure, and enables schools and a variety of specialised private providers to meet a variety of needs in increasingly effective and targeted ways" (Hess, 2012, p. 182). Horwitz (2012) defends the profit motive of schools, that decisions made based on a profit motive are no more or less self-interested than government officials motives while profits "communicate knowledge about the efficiency of resource use and enable producers to learn what they are doing well or poorly" (p. 57). An "EduBusiness" (Ball, 2007) is a company that provides education services but operates in a business market and may be driven by a profit motive. An EduBusiness has dual goals of profitability and education outcomes.

The formulation of schools as businesses is hypothesised to benefit teachers. VanderArk (2012) states that market-based solutions for "reformulating old debates can result in win-win-win solutions for students, teachers and parents" (p. 203). Hoxby (2002) predicts that schools competing in the marketplace would "create a more high-powered incentive environment within the teaching profession. That is, teachers would be required to have higher levels of human capital and effort in return for higher marginal wages for such characteristics" (p. 883). In these circumstances, it is seen as a strength that "under increased school choice, less skilled or motivated incumbent teachers might find themselves earning smaller salary increases than some of their peers. Such teachers might be more likely to leave the teaching profession early" (Hoxby, 2002, p. 35). The conclusion is that teachers would be motivated to improve their skills and that teachers who have developed highly valued skills would be rewarded. Without going into details about how teachers make it happen, creating a competitive environment is presumed to allow "the opportunity to learn more, faster, and cheaper" (VanderArk, 2012, p. 192). Competition between teachers is cited as the way to revolutionise teaching by "raising the demand for teachers with high quality college education, raising the demand for teachers with subject area (especially math and science) skills, raising the demand for teachers who make extra effort and are independent, and lowering the demand for certification" (Hoxby, 2002, p. 35). Tooley (2003) downplays criticism that profit undermines how teachers' work is valued, stating that teachers are just like "any other agents that deliver any educational opportunities" (Tooley, 2003, p. 430). Schools based on market forces are presumed to create teachers who thrive in competitive systems, working in their own interests and therefore, improving the entire system. While a marketised system of schools is often defended as potentially revolutionising education and benefitting teachers, the

mechanism of how marketisation affects teachers and their work to obtain this outcome is unclear.

While placing schools in a marketplace is not the only opinion about how to improve education and most schools around the world are public schools, the marketisation of schools occurs in many different forms around the world. The Organisation for Economic Cooperation and Development (OECD) reports that 85% of lower secondary students in OECD countries attend public schools (OECD, 2018, p. 151) and educational institutions are predominantly publicly funded worldwide (OECD, 2018, p. 26). However, there is a blurring between public and private provision as "new markets and opportunities for profit are being sought everywhere in the education experience" (Ball, 2018, p. 588) and where schools of all types experience a "generalised commodifying and marketising effect, making education ever more business and market 'ready'" (Ball, 2018, p. 588). Public schools can be operated by charter management organisations or other private organisations as part of a quasi-market, while private schools may be wholly community supported without any market forces affecting a school (for an introduction to quasi-market schools see LeGrand, 1991). In many schools, marketisation may be just one of many interacting influences on schools and teachers' work. This makes it potentially difficult to research when many confounding factors exist. International schools provide an excellent context in which to research teachers' work where marketisation is a guiding force for school operations.

International Schools. The "well-kept secret" (Hayden & Thompson, 2008, p. 15) of the increasing presence of international schools around the globe has meant that surprisingly little research has been conducted about these schools and their effects. International schools are not particularly well understood although they are a

growing sector of education that has significant influence on global education policy (Waterson, 2015). The history of international schools dates back to the children of diplomats. However, more recently, international schools have become the primary way for the children of employees of global corporations to access education outside of their home country (Walker, 2013) and this has gradually shifted away from parent-sponsored schools to increasing numbers of for-profit schools in competitive markets (Bunnell, 2016). Private schools and private for-profit schools are sometimes dismissed as being only for children of the elite, but increasingly, for-profit schools have become the only option in locations where there are few state-run schools (Ridge, Kippels & Shami, 2015). While the first international schools around the world were run as not-for-profit schools, mimicking a foreign public education systems and operated under the direction of a foreign government body, "increasingly the demand for international school education is being met by for-profit corporations that are starting up or buying up international schools around the world . . . [identifying] the international school sector as both financially lucrative and recession proof" (Waterson, 2015, p. 2). International schools are no longer simply for children of visiting expatriates but are a rapidly growing sector potentially in competition with public systems.

International schools are difficult to describe as a homogenous group as they exist in many different places along a continuum of, at one extreme, enrolling an international student body and international teachers with an international curriculum and, to the other extreme, enrolling local students and staff while using the local language and curriculum but with an ethos of *international mindedness* (Hayden, 2006). Hayden and Thompson (2016) found it so difficult to categorise international schools that they suggested instead to describe them on a "spectrum from market-

driven to ideology-driven" (Hayden & Thompson, 2016, p. 11) for whether international schools were part of a sector of education competing with the state sector or existing to instil a specific national or international identity in students. On this spectrum, the extent of marketisation of a school was more descriptive of the schools than categorising it by the mix of students, staff or curriculum offered at the school.

The growth of international schools has been due to increasing enrolment of national students, often competing with national systems. MacDonald (2006) describes the process that the market for international schools for expatriate families eventually stalls and, consequently, the only way to continue to expand the business is to create schools catering to the demands of local students. As the international school system is significantly made up of for-profit schools, growth is necessary for the system to be financially sustainable. Walker (2013) predicts that international schools will continue to shift from serving children of expatriates to become "an option for the nationals of the host country who are dissatisfied with their own system and are in a position to afford, or in some cases even to build, an international alternative" (p. 201). Brummitt and Keeling (2013) project that "almost two thirds of the growth in the current market is as a result of this increase in demand from local nationals and this looks set to continue and expand" (p. 34). With huge opportunity to serve host-country nationals "international schooling is clearly now a commodity, and the large growth observed in the international school sector in very recent years . . . is undoubtedly in this newer 'non-traditional' form of international schooling worldwide" (Hayden & Thompson, 2016, p. 13). While international schools of the past were rare and exclusive, schools run outside of government ownership have

become an increasingly popular option, demonstrating the increase of the globalisation of education (Hayden & Thompson, 2016).

The number of international schools is large and increasing, and these schools must be recognised for their influence on the global education policy and discourse. A significant component of this influence is related to normalising the marketisation of schools as most international schools are run as for-profit institutions (Brummit & Keeling, 2013, p. 30). The International Schools Consultancy (ISC) Group predicts that by 2025, 8.26 million students will be attending English-medium international schools in non-Anglophone countries (or British schools in USA, American schools in UK, etc.) and that "by 2024, there will be over 12,000 international schools . . . generating an annual fee income of over US$62 billion (£37 billion)" ("New data on international schools suggests continued strong growth", 2014). In 2000, the international education sector was estimated as worth $4.9 billion but at the end of the 2017-2018 school year was estimated by ISC Research to be worth $48.1 billion dollars ("Why this expat business is moving back to Britain", 2018). GEMS education considered an initial public offering in 2018 and was estimated to have market capitalisation of $4.5-$5 billion which would have made it the largest initial public offering in London since 2017 ("Education company GEMS shelves multi-billion dollar London IPO: sources", 2018). Cognita schools is currently in the process of being purchased by the investment firm Jacobs for $2.5 billion ("Switzerland's Jacobs Holding to acquire schools group Cognita", 2018). Other influential education management organisations such as Nord Anglia, have transitioned back and forth between being publicly traded and privately held. In 2017, Nord Anglia was purchased by the Canadian Pension Plan Investment Board and Baring Private Equity Asia for $4.3 billion ("Canadian-led consortium to buy Nord Anglia for $4.3 bn",

2017). Within these figures, it becomes clear that for-profit international schools are a major player in education as well as in global business.

This sector of the global education landscape should not be ignored by research simply because it is not exclusively occurring within government systems. The influence of international school management companies goes beyond the individual schools as these companies are increasingly involved in creating chains of schools, supplying professional development and providing teacher training (Hayden and Thompson, 2008). Ball (2012a) notes the relationship of education management organisations that operate international schools to larger networks of political and business interests. Education management organisations are not only building schools but are playing a role in shaping global education through highly visible awards, partnerships, and consultancies (Hayden & Thompson, 2008). This will likely usher in significant changes in education as "the dismantling of public education is evident through the privatisation of collective assets and service provision, and the entry of new providers with a for-profit motive" (Gunter & Fitzgerald, 2015, p. 101). In the international sector, corporations "have entered previously highly contested terrain through new norms that are mostly tied to business interests" (Bhanji, 2008, p. 64) and this has "evolved with increased non-state actors playing an important role in global governance" (Bhanji, 2008, p. 64). The result of the increasing presence of for-profit education management organisations is the normalisation of non-governmental actors as authorities on education policy and the insertion of the ideology of marketisation in education reform around the world.

While many for-profit schools are run as single schools by single owners, several large multi-national education corporations have developed with a focus on primary and secondary education. Waterson (2015) has identified a group of trans-

national education corporations that "with such growth performance and ambition [these] TNCs [trans-national corporations] are clearly becoming established players in the market for international schooling" (p. 12). MacDonald (2006) notes the influence of international schools as a prime example of how the "line between education and business seems to be increasingly blurred in modern times" (p. 194) and the marketisation of education is evident in how "international schools are becoming more business-like in their approach" (p. 194). The influence of for-profit corporations in education is unlikely to decrease as these companies are spreading around the world and becoming involved in increasingly more facets of education. Ridge et al (2015) recommended studying the privatised systems of the United Arab Emirates and Qatar as the "cautionary tale" for what "education looks like when it is dominated by the for-profit private sector. The trend towards private companies operating public schools continues across Europe and North America, with for-profit education management companies chipping away at the public education sector" (Ridge et al, 2015, pp. 47-48). Other researchers call for an investigation into the effects of these changes. Torres (2009) calls on researchers to ask, "Are the processes associated with globalization playing any role within the classroom? How is globalization affecting the lives and work of teachers in each of the countries?" (p. 27). Bhanji (2008) asks, "How are their educational policies and priorities influenced by the weight of corporate investments in education? What and whose knowledge is being promoted?" (p. 70). Bunnell (2016) calls for research to focus on the "*impact* and *effects* not just *ideology* and *existence"* (p. 556) of international schools. In the international school sector, the marketisation of schools and its influences on teachers becomes a prominent feature of any discussion.

Problem Statement

The arguments for the marketisation of education "lack much in the way of grounded evidence that supports their assertions. The 'proved superiority' of the market economy is not backed up by any specific empirical data" (Olmedo, 2013, p. 59). Nevertheless, the goals of being "business-like', are celebrated within policy as an unreservedly good thing . . . on the assertion of basic and unproblematic commonalities between education and business" (Cribb and Ball, 2005, p. 118). The negative behaviours associated with business are de-emphasised or assumed to have little effect on education while at the same time marketisation is promoted as innovative as "advocates of marketisation alternately downplay the change so as to disarm its opponents, or talk up the economic market character of education" (Marginson, 1999, p. 235). The assumptions that schools should be marketised and put into competition has been met with "negligible public debate and discussion on whether this might be a desirable path to follow or not – it has become an unquestioned and unchallengeable article of faith" (Smyth, Dow, Hattam, Reid & Shacklock, 2000, p. 1). The discussion is unbalanced with a hidden assumption that the market has only positive effects and that the strengths of a market-based school will be beneficial to teaching as a profession. Teachers are enveloped in the processes of marketisation in the "rush to encase schools within the ideology, practices and values of the business sector — never mind that they have histories, aspirations and professional cultures that make them decidedly different to car plants, breweries or fast-food outlets" (Smyth et al, 2000, p. 1). Dillabough (1999) describes that "the notion of the teacher as a rational and consumer-oriented professional is heralded by the state and mainstream scholars alike as key to the success of 'education in the market place' and thereby central to the transformation of the nation as a global

economic force" (p. 373). Questions of the effects of marketisation on teachers, the process of education or its purpose are what market advocates "would prefer to avoid, so that everything becomes a technical question and value questions are marginalised" (Wrigley, 2018, p. 373). Evidence that these practices work is not required when the belief in markets is so deeply embedded in the assumptions of how to operate schools and other public institutions.

When marketisation seems like the logical and unquestionable way to transform schools and is promoted by influential business interests, opposing "arguments have no grip at all" (Connell & Wood, 2005, p. 362). Market advocates have dominated the conversation about education and the "discourse of competition, markets and choice . . . accountability, performance objectives, [and] standards . . . have created such a din that it is hard to hear anything else" (Apple, 2000, xii). The "new voices within policy conversations and new conduits through which policy discourses enter policy thinking" (Ball, 2012a, p. 138) are the voices of business as "the moral and financial 'authority'" (Ball, 2012a, p. 138). When education is framed by the values of marketisation, it creates a system of ideals and practices that "affect the way in which we understand education, the roles of actors that are involved in it and, more broadly, how we think [about] society and assign positions and possibilities to ourselves within its/our rules and boundaries" (Olmedo, 2013, p. 72). McKnight and Whitburn (2018) argue that the types of research about teachers that are 'objective' and 'outsider' like random controlled trials and meta-analyses are "the kind of knowledge that is valued, [but] this is not teacher knowledge or student knowledge" (p. 8). Research evaluating business-like principles of outcomes, accountability, and competition that excludes teachers' perceptions may exacerbate the situation because "research regimes could be contributing to epistemic injustice as

they create their own loops that do not always allow entry for alternative or disqualified knowledges" (Morley, 2016, p. 31). Because arguments against marketisation are often argued through different frames than economic or business principles, they may be dismissed, not on their merits, but based on not meeting the assumptions of what counts as knowledge. Consequently, marketisation cannot currently be fully understood or criticised because "research which accepts the terms of market reform cannot place it under sufficient critical pressure to enable a full evaluation of the long-term historic costs and benefits" (Marginson, 1999, p. 237). Investigations into schools that are focused on the economic benefits of schooling disqualify the knowledge of teachers or "when present, teachers' voices — as data — are mono-tonal; a stripped-down version of possibilities for knowing the world" (Robertson, Mundy & Verger, 2012, p. 23). In the context of marketised schools, where certain kinds of knowledge have been privileged and teachers' experiences devalued, the questions become: What are the experiences of teachers? and What methods must be used to understand their work?

Methods Introduction: Scale Construction with a Feminist Approach

With the aim of understanding teachers' experiences in a marketised context, a scale construction approach with a feminist perspective was chosen as the method of research. In an environment where schools are experiencing the "inexorable growth of the market into many areas of life thought to be outside the purview of market forces and arrangements" (Verger, Steiner-Khamsi & Lubienski, 2017, p. 326) and "all the education market-making processes described . . . have powerful, well-resourced and well-connected promoters behind them" (Verger et al, 2017, p. 336), teachers' perceptions may be lost. However, a feminist analysis has the potential to bring new perspectives that can break into the debate. Using a feminist framework "enables the

exploration of the voices of those typically not heard in traditional policy contexts and processes" (Diem, Young, Welton, Mansfield & Lee, 2014, p. 1078). A feminist perspective means "paying attention to the everyday lived experiences of power and policy" (Pillow, 2017, p. 266). The scale construction approach through mixed methods was chosen for this research because it allows development of "an instrument that is grounded in the views of participants (e.g. patients) rather than [using] an off-the-shelf instrument that might not reflect their views" (Creswell, Fetters and Ivankova, 2004, p. 11). A measurement instrument relates something observable in the world to something that exists as only a theory that is latent or unobserved (Wilson, 2005, p. 4). The outcome is quantitative but has the potential to illustrate the lived experiences of people in the context.

Feminist critical policy analysts like Marshall and Young (2006) and Westmarland (2001) argue for the importance of tuning the design of research to the audience, stating that it is "important for researchers to 'speak the same language' as those to whom the research will be presented" (Westmarland, 2001, p. 19). When quantitative data is considered hard proof, it becomes necessary for researchers to design their research based on what policy audiences will view as proof (Marshall and Young, 2006). An approach to measurement through constructing scales can do more than qualitative analysis alone and has a quantitative outcome that may be attractive to policy audiences.

In this research, the term 'measurement' is used very carefully in a way that is not interchangeable with statistics or even quantitative methods. The methods used in this research were used to construct measures (Bond & Fox, 2015; Wilson, 2005) through Mokken Scale analysis (Mokken, 1971) and Rasch analysis (Rasch, 1960). Scale construction does not result in raw data, counts of responses or percentages per

response category to be reported. Through scale construction, what is being measured is something that is not directly observable but can be considered additive measurement if each item of the scale is observable (or can be assigned an observation) and each item shows increasing amounts of the latent variable. Fisher (2004) describes how metrologists (measurement scientists) investigate measurement by using tests of robustness to "establish a consistent, stable relationship between the structure of number and additive amounts of the thing measured" (p. 434). If that relationship exists, then the outcome is a measurement model. Panayides, Robinson and Tymms (2010) demonstrate the potential of Rasch analysis as they portray the "diversity of situations in which this approach can be used productively over and above the usual assessments of ability in educational tests, the positioning of persons of the latent trait line in psychological tests and the identification of aberrant response patterns in tests or psychometric scales" (p. 619). Due to the approach of using a model to understand the data, scale construction allows research to be conducted in innovative ways without relying solely on accepted theories or knowledge.

This research was undertaken to construct scales, grounded in the experiences of teachers, that could demonstrate additive relationships between the influences on their work. The main benefit of a scale development approach is that it allows for investigation of the construct of interest. Long, Wendt and Dunne (2011) describe how "research conceptualized within a Rasch measurement framework can incorporate both qualitative and quantitative methods interactively and through this interaction deepen the investigation of both the construct of interest itself and the validity of the operationalization of the construct in assessment instruments" (p. 388). The scale construction approach allows for intense investigation of the context through finding how teachers' perceptions form patterns across a range of experiences

and which items do not fit into scales. The feminist lens guides the mixed-methods approach to include the experiences of teachers at as many points in the process as possible, to acknowledge a range of experiences of teachers, and to seek out the larger patterns while still honouring each individual's experiences.

Sprague (2016) recognises the absence of discussion of personal involvement by quantitative researchers. She finds it strange that researchers who use quantitative analysis methods maintain a facade that the methods do the work rather than the researcher. This separates the researcher from the research, as if objective methodologies can occur outside of the perception of the person doing the work. My own experience as a teacher in a for-profit school, my training in Mokken scale analysis and Rasch measurement, as well as my knowledge of feminist theory, frame how I think quantitative research should be conducted. I see clearly that even quantitative research is rooted in the experiences, expertise and trustworthiness of the researcher. My position as a feminist and as a quantitative researcher leads me to carefully consider how research should be conducted, framed and discussed as well which theorists and methods should be chosen. My hope is that my use of "feminist theory challenged both the content and the frameworks of discourses, disciplines and institutions, attempting to present alternatives or develop them where they did not yet exist" (Gross, 1986, p. 194). My own experiences have led me to be primarily interested in the stories of teachers and to use those stories to construct scales. From this position, it is not acceptable to report only quantitative analysis results that tell teachers' stories only in small pieces or illustrate the overall patterns without reference to the origin of the items. The research also needs to incorporate individual stories alongside the quantitative results. Lefstein and Perath (2014) describe how meaningful research "necessitates securing conditions in which speakers . . . can

express themselves in their own terms, and be listened to, understood and heeded" (p. 35). The final step of the research elaborates the scales through teachers' stories, integrating individual experiences and qualitative data with the quantitative findings.

Relevance

Although significant research exists about the work of teachers (Acker, 2004; Ball, 2012b; Ball, 2003; Codd, 2005; Cribb & Ball, 2005; Gewirtz, 1997; Smyth et al, 2000), the gendered nature of work (Alvesson & Billing, 2009; Acker, 2004; Blackmore and Sachs, 2012; Calás, Smircich & Bourne, 2009; Dunford & Perrons, 2014), and the marketisation of schools (Ball & Youdell, 2008; Marginson, 1999; Larner, 2000; Whitty & Power, 2000), there is only a small amount of literature about teachers' experiences in international schools or the impact that marketisation has in its most intense form (i.e. for-profit schools). The lack of research on these surrounding topics has been noted by many researchers. Bailey (2015) notes the "paucity of data examining teachers' work in international schooling" (p. 6) and Bunnell (2017) describes how "little is known about the body of international school teachers, in general, and it remains a relatively under-researched, under-theorised and little-discussed topic, even in mainstream international education literature" (p. 195). The effect on teachers has also had little research attention. Walker (2013) emphasises that "it is astonishing to discover how little has been written about the likely impact of globalization on systems of education" (p. 196). Codd (2005) states the importance of further investigation of for-profit school citing "very little research on the educational effects of international commercialisation . . . [and] its effects on the work of teachers" (p. 199). Mahoney, Hextall and Menter (2004) "call for a robust research

agenda that maps the political, social and cultural implications of 'edu-business' in all its forms" (p. 294).

Where marketisation and the effects on teachers have been studied, the research has been conducted to demonstrate the ways marketisation has crept into state or public schools. Unfortunately, this means that only readers who already believe that marketisation is harming the system will engage with the research. Where research into for-profit school exists (e.g., Stanfield & Vander Ark, 2012; Tooley, 2007), the research has the mark of producing "contractually agreed-upon knowledge" (Sturges, 2014, p. 282). While this research claims objectivity and hides its political leanings or vested interests, it seems completed as "commoditized knowledge work" (Sturges, 2014, p. 282) funded by businesses that profit from the findings. These problems mean that a substantive discussion about the experiences in these schools cannot happen with current approaches. The importance of this research is to open the discussion so that teachers' experiences of marketisation lead the way. When researchers fail "to record the voices of ordinary teachers, the literature on educators' careers actually silences them [and] what emerges in an instrumental view of teachers, one in which they are reduced to objects which can be manipulated for particular ends" (Casey, 1992, p. 188). By starting at the point of teachers' stories, this research has a potential for greater understanding of teachers' experiences in marketised contexts.

Organisation of the Dissertation

Chapter 2 of this dissertation is a review of literature about the study of teachers' work and an examination of different methodological approaches for conducting that work. The literature connects early sociological studies of teachers'

work to more modern discussions of teacher effectiveness that consider teachers a group worthy to be studied and evaluated through objectivist approaches. As a counterpoint, the research that uses subjectivist approaches such as teachers' own stories of work to understand schools is discussed and related to other critical pieces of research. Structural, post-structural and feminist critical analysis examples are reviewed as ways to examine teachers' work. The chapter concludes with a discussion of how a feminist approach potentially integrates different traditions and methods.

Next, Chapter 3 describes the methods chosen for this research. The chapter begins with a description of my own position and how epistemological consideration framed my choices for mixed-methods data collection and analysis. The three-stage design is:

- Stage 1: Construct Investigation. Data is collected through interviews and analysed with thematic analysis.
- Stage 2: Construct Development and Piloting. Constructs are developed by transforming the themes into items to describe each construct. The items are piloted and analysed using Mokken scale analysis.
- Stage 3: Measurement and Contextualisation of the Quantitative Data. Measures are obtained through Rasch analysis, compared using linear and multiple regression analyses and path analysis, and the findings are contextualised with teachers' stories from the initial interviews.

The findings are presented in Chapter 4. Each research question is answered with the psychometric properties of each scale, the criteria that were used to evaluate the quality of each scale, the items that were included in the item hierarchy and a discussion of the scale in conjunction with literature that the findings of that scale support or refute. The results of the analysis of idiosyncrasies of items due to item bias and respondent differences are presented. Each scale is then elaborated through a re-telling of the story of a teacher who participated in the interviews. The findings for the final research question investigating the relationships between the scales are

presented as a process of model development and the findings are also discussed in conjunction with the literature and a teacher's story.

The summary in Chapter 5 includes the key findings of the research, the significance of the findings, the limitations of the study and thoughts for further research that were prompted by this investigation. The conclusion is a re-evaluation of my own story of working in a school in a marketised context by looking through the lens of the findings.

Chapter 2: Literature Review

In this literature review, three principle ways that teachers' work has been studied are discussed: the objectivist approaches to studying teachers, subjectivist approaches including teachers' perceptions about their work, and critical perspectives on understanding teachers' work.

The first section of the literature review focuses on ways teachers' work has been researched through objectivist approaches. Beginning with the origins of sociological study of teachers' work, this section includes discussion of different ways that teachers' work has been researched through qualitative and quantitative approaches from an objective or outsider perspective. This includes observing teachers' work, quantifying teacher effectiveness and using statistical methods to connect teachers' perceptions of their work to students' standardised test scores.

The second section of the review includes discussion of research about teachers' work that relies on subjectivist approaches, in particular, approaches that include teachers' accounts of their experiences. This includes literature about teachers' feelings about their work, teachers' narrative stories and research focused on teachers' descriptions of interacting with their school context.

The third section reviews several critical approaches to researching teachers' work including discussing teachers' work as affected by structural forces, the post-structural response to this, critical approaches to analysing marketisation and analysis of teachers' work that moves beyond the structural versus post-structural debate while also integrating gender into the analysis.

Looking at teachers' work, the evolution of approaches to researching teachers and the range of methods used to understand teachers' experiences lays the groundwork for further investigation into teachers' work in marketised contexts.

Objectivist Approaches to Studying Teachers' Work

The research seeking to understand teachers' work is historically embedded in a sociological perspective. Sociology was initially conceived as the science of human activity. Early sociologists felt that, through empirical research, they could develop rational explanations to solve societal issues. This research was often aimed at societal development, especially for economic potential. Comte (1848/2009) was the first to use the term *sociology*, influencing the scientific and quantitative approach. Although many different perspectives can be located under the umbrella term of sociology (Robinson, 2017), the initial framing by Comte (1848/2009) was positivist, believing that observation, experimentation and comparison through the scientific method would yield the most revealing information about human behaviour. Early sociological studies of schools investigated the characteristics of schools and teachers. Lauder, Brown and Halsey (2009) trace the history of sociology in education, identifying different branches that sociological research has followed. From the view that sociology should study the potential for schools to cure social ills, education research developed a focus on evaluating teacher effectiveness and how to assess social mobility in schools. This branch of studying teachers' work purportedly assesses teachers' work from an objective stance. While the methods vary, quantitative investigations are privileged under the assumption that they produce better information that is not sullied by teacher knowledge, opinions or experiences (McKnight & Whitburn, 2018). This section of the literature review discusses early sociology of education, the *what works* trend in studying teachers' work, teacher effectiveness and other ways that teachers' work has been quantified.

Sociological approaches to studying teachers. Teachers and their work have been the subject of sociological studies of education since the inception of sociology

as a field. These early sociological studies of teachers aimed to categorise people, identify the roles teachers played within a group, and investigated the interactions of context and individual attributes. Waller's (1932) *The Sociology of Teaching* may be the first attempt at a sociological study of schools but even before then, Durkheim (1893/2014) wrote about education, the authority of teachers and the division of labour as a system of structural functionalism. Durkheim argued that people are socialised to fit roles like *teacher* and emphasised viewing the teacher as a member of a group while also acknowledging the individuality of each teacher. This sociological framing described teachers as critical to the socialisation of young people and powerful as "the representative of authority of society" (Ottaway, 1968). Durkheim's codification of structural functionalism and the division of labour led to the development of Role Theory (Mead, 1934; Linton, 1936). Role Theory proposed that every person inhabits a role with specific duties, rights, expectations and behaviours related to that person's social position. The theory was used to analyse how individuals' activities connect to a social group or contradict social expectations. Merton and Merton (1949/1968) further defined role theory and used teachers as an example of how conflict occurs naturally between people in different *role sets*, like the inherent tension between teachers and school board members.

While early studies by sociologists in education focused on the role of teachers, this was limited to generalisations about all teachers and a narrow view of the work performed by teachers. These early studies are now outdated due to the limited responsibilities of teachers at the time, restrictions on who entered the teaching field and many other factors that have significantly changed the work of teachers since the turn of the 20th century. Feminist sociologists have criticised role theory for conflating individuals with the roles they take and have pointed out how the

role descriptions are generally based on stereotypes (Stanley & Wise, 2002, pp. 107-109). Stereotypes about teachers are gendered - Linton's (1936) choice of title, *The Study of Man,* is an indicator - and likely based on preconceived notions of class, race, sexuality and other personal attributes that extend beyond social position. However, even with these limits, the early sociological examination of teachers did legitimise analysing teachers and their work as a field of study. Waller's (1932) analysis recognises "tension between schools as static dominance structures and schools as dynamic processes of social interaction" (Bredo & Henry, 1996, p. 12). Waller was one of the first to describe the larger social influences on how schools operate and recognised the ways teachers are influenced by their work.

The field was developed further to understand how the personal background of teachers interacted with their work. For example, Gouldner's (1957) discussion of manifest and latent social roles considered a range of characteristics about workers beyond their job responsibilities. A social role was defined as "a shared set of expectations directed toward people who are assigned a given social identity" (Gouldner, 1957, p. 283). Gouldner may have been the first to suggest that within the manifest role of *teacher*, a factor such as gender or class would interact with the manifest role. Gouldner (1957) stated:

> Many sociologists give little indication of the fact that the people they study in offices, factories, schools, or hospitals are also males and females. The sociologist's assumption often seems to be that the latent identities and roles are as irrelevant as the people whom they are studying conventionally pretend. The fact seems to be, however, that these do affect group behavior. (p. 285)

Becker and Geer (1960) extended the analysis further, looking specifically at the interaction of education and the culture of a workplace. They explored formal and informal culture in organisations and how manifest and latent identities interact with social groupings. They found that groups of people form manifest cultures based

around shared experiences or problems but that these formal cultures are influenced by other less visible latent cultures (e.g. social class) that are also shared between people in groups. They identified ways that an individual's *social class* or *power* combined with manifest and latent identities. While their analysis acknowledged variation within groups, they recognised that group membership did not fully explain the ways that race, gender, religion, sexual orientation or other individual factors interacted with prominent latent identities. Becker and Geer (1960) described people who did not obviously fit the larger latent cultures as the "residual group" (p. 312), who may struggle to find legitimacy even in the formal and manifest cultures of the group. The inability to categorise all people within latent and manifest identities is evidence that relying on labels may be inappropriate or amount to discrimination. The analysis done by Becker and Geer is limited by an assumption that determining group membership was necessary and that belonging was always preferable to uniqueness. This analysis seems limited when invisible structural conditions that cause certain members of society to feel excluded (e.g. sexuality, disability, etc) are considered. In addition, the focus on individual characteristics as the primary contributors to latent culture restricted the understanding of the interplay between individuals and their workplace.

To improve upon the sociology of teachers' work, Morrison and McIntyre (1973) focused on an array of other factors that influence teachers. They found that relationships with administrators, colleagues, parents, and other people involved in education affected teachers regardless of the individual characteristics of the teacher. They determined that many variables affect teachers but "that it is the characteristics of the institutions in which teachers work, rather than those of particular individuals, which are most likely to affect their behaviour" (Morrison & McIntyre, 1973, p. 119).

Lacey (1977) explored this concept further, discussing the skills and values of teachers and the ways they can interact with the institution. Lacey (1977) described how teachers employ "strategic redefinition", "strategic compliance", and "internalized adjustment" (p. 100) to renegotiate when their values and attitudes were challenged by working in a school.

Early research about teachers and their work viewed teachers as people to fill roles. It further evolved into understanding how teachers bring their own experiences and backgrounds to work, integrating how individuals interact with formal and informal organisational cultures. While these early studies legitimised the field of study and identified the interaction of teachers' identity with the workplace situation, the research lacks nuance about the experience of teachers. The approach of the research was often to observe without significant interaction with the teachers and was conducted by people who had never been school teachers. The objective and outsider view was deemed as scientific sociology at the beginnings of the field.

Objectivist approaches and the shift to *What Works*. One very significant branch of research from an objectivist approach has focused on what work teachers do, the importance of teachers for improving students' achievement, the conditions to create good schools, and changing teachers' work to gain specific outcomes. The focus on teachers' work in this branch of research centres around investigating how to improve schools, often measured by students' results. Lauder, Brown & Halsey (2009) note the societal shift in perception from assuming teachers had little influence over children's life chances to viewing education as a pivotal way to address social problems. After this shift, teachers' work is seen as important to study to understand how inequalities can be remedied through education and standardised assessments become the primary evidence of improvement.

The evolution of education research in the United States is a prime case for how quantitative analysis has developed to understand teachers' work. With the release of the "Coleman Report" (Coleman, Campbell, Hobson, McPartland, Mood, Weinfeld & York, 1966), the debate about which factors most influence students' achievement was ignited. For the first time, race, gender, socioeconomic status of students, teacher quality and school quality were tested for statistical significance. While the statistical methods used at the time are now recognised as seriously flawed (Alexander & Morgan, 2016), the reaction to the report was to create more technical quantitative comparisons of schools and teachers. Statisticians Hanushek and Rivkin led the trend of using statistical analysis of students' outcomes to assess teacher effectiveness and introduced the concept of Value-Added Measures (Hanushek, 1992; Hanushek, 2003; Hanushek and Rivkin, 2006; Hanushek and Rivkin, 2010). They originated the popular, but poorly supported, claim that so-called *great teachers* can produce a year-and-a-half worth of progress with a student while other teachers produce only a half of a year (Hanushek, 1971). Their analyses have focused on a variety of student factors (number of children in the family, fathers' careers, etc) and teachers' economic factors (most prominently, teacher salary) to prove that teacher quality must be the determining factor of students' outcomes while defining teacher quality as the standardised test scores of students. Advocating for a remodelling of the United States' school system through school vouchers, Chubb and Moe (1990) conducted large-scale statistical analyses to find the impact of teachers, school culture, student background, school choice and many other variables. They argued that school autonomy and freedom from bureaucracy would improve schools through a competitive market system. They acknowledged the importance of teachers and how bureaucratic and political systems influenced the work of schools. However, their

analysis did not consider endogenous reasons that some schools would have better results than others (Tweedie, Riley, Chubb & Moe, 1990) and created metrics from available data that may not have accurately represented school conditions, like single-item attitudinal data and demographic data that was not matched to the individual students or schools.

Unfortunately, many of these studies have serious limitations but have had long-term consequences on education policy. Studies like those conducted by Chubb and Moe (1990) have been used to disprove policy options (e.g. increasing teacher wages or teacher union participation) ignoring problems of endogeneity and making claims about the direction of causation that are not appropriate with the data set utilised. In many of these quantitative studies of teachers inadequate sampling, weak analysis and over-claimed evidence with numeric results have been used as if they had the power to identify everything that needed to be known about schools and how to change them. While these studies claim "great statistical innovations . . . all that has been accomplished is the building of a better mousetrap when the problem is ants" (Fortune & O'Neil, 1994). The influences on teachers by bureaucracy and politics are assumed to be fixed by allowing schools to work in a competitive system with school autonomy, ignoring that the "incentives of the marketplace" (Chubb & Moe, 1990, p. 190) may also have personal consequences for teachers and that competition with "performance-based attrition" (p. 190) of schools makes education provision insecure. Ravitch (2016) describes the political conditions in the United States that created the drive for school reform around the time of the report *A Nation at Risk* (National Commission on Excellence in Education, 1983). She cites rapidly changing demographics, inclusion legislation and changes in standardised testing as together contributing to misleading statistics that led to conclusions that schools were

deteriorating across the country. Since those initial studies, researchers have developed more robust statistical methods holding constant effects on students like family influences or socio-economic status to find the ways that teachers influence differences in students' outcomes.

Teachers were cast as a main source of the problems identified in *A Nation at Risk* and, contradictorily, also the way to solve all the problems of schools. Older studies with determinist views "left teachers in limbo since it implied that they could not make a difference" (Lauder et al, 2009, p. 572). On the opposite end of the spectrum, more recent commentary based on the idea that teachers are the key element to guaranteeing future success for all children "has perpetuated an expectation that teachers are responsible for all the injustices and inequities that undermine our lives" (Grumet, 2010, p. 74). Unfortunately, trying to prove that teachers make a difference above other factors simultaneously elevates and degrades teachers by taking teachers' judgment out of the equation and ignoring other influences on students or on teachers' work. Based on these early analyses of students' outcome data and the simplistic message that teachers' work can be defined as what works for students' test results, research has grown to focus significantly on the measurable aspects related to teachers' effectiveness.

Teachers' work as judged by effectiveness. While earlier statistical studies investigated a variety of school-related variables, this field has narrowed further to relying on observable, measurable teacher activities and students' outcomes. The study of teachers' work has centred around multiple questions: What *work* do teachers' do? How do teachers *work*? What do we mean when we talk about teachers' *work*? In some research, the multi-layered meanings of work have been reduced to a single question: How do we know that teaching *works*? This analysis has evolved

around the premise that "*Teachers are agents of education change and societal improvement"* (Fullan, 1993, p. 11, emphasis in original) but at the same time, researchers are asking "do teachers count?" (Hanushek, 1971). This genre of teacher effectiveness research is based on the premise that significant educational change is necessary and that the primary way to improve students' outcomes is to change teachers' work. Students' outcomes become the purpose of the work, the evidence that things are working and the focus around which the work of teachers should be modelled.

In one of the most widely-cited education research books ever, Fullan's *The New Meaning of Educational Change* (2007) discusses the importance of change for school improvement. Fullan (2007) describes barriers to educational change, including problems of teachers' individual focus on students, obstacles to teacher collaboration, the influences on schools and school culture. In subsequent publications, Fullan describes the ways that change is imperative in schools, recommending that change must be quick and dramatic. While reforms of the past are described as failing, Fullan (1993) argues that previous problems with change are simply evidence that change in schools must be done with the express purpose of increasing students' results rather than aimed at incremental change. Joyce and Calhoun (1991) review Fullan's work and describe this genre of change and innovation research as seeking to "learn how to modify the culture of schools so that educators will be as skilled at rejuvenating the educational system as they are at managing it in its present state" (p. 336). The responsibility of increasing individual students' results and overall school improvement is essentially laid at the feet of teachers and achieved through modifying their own behaviour at work. Beyond seeing education policy or school administration as leading change, "all personnel would

study the technical aspects of change: how to learn new teaching skills, to incorporate new technologies, to implement curricula, and to cope with the stress that inevitably accompanies change" (Joyce & Calhoun, 1991, p. 337). This responsibility and importance given to teachers and their work is presented as an acknowledgement of the status of teachers. Unfortunately, it includes only a limited perspective of all the factors that affect students and their test scores. The narrow view potentially reduces the work of teachers to be defined as effective practices while it excludes other important social or emotional work teachers do and ignores the importance of school as a workplace for adults.

Connell (2009) tracks the historical shift of the role of teacher from an obedient servant, developing teaching into a profession and then into a "technical-professional model" (p. 215) particularly focused on standardised assessment. She argues that this change in the role of teachers has been accompanied by a shift away from valuing workers' previous experience as teachers because "field-specific expertise (e.g. from prior experience as a teacher or principal) was devalued in favour of generic managerial skills and practices, using technical measures of organizational efficiency and effectiveness" (Connell, 2009, p. 217). This strand of technical-professional supporting research has focused on *provable method*s and their *measurable efficacy* through "visible learning" (Hattie, 2008), "effective instruction" (Marzano, 2007) and "effective and efficient teaching" (Archer and Hughes, 2010). Educators are judged on whether they have the "qualities of effective teachers" (Stronge, 2007), often narrowly defined as which measurable attributes about a teacher are correlated to students' standardised test achievements. The attributes for teachers to develop are generic, managerial-type skills that can be compared across age groups and disciplines as if the attributes of an effective teacher are comparable

regardless of context and the inclusion of "collaborative competition" (Fullan, 2011) will garner the best results. This strand of research analyses which teacher characteristics demonstrate value and which teacher actions can be considered effective means to specific ends. For example, Rice (2003) examines how teacher experiences, preparation program, degree, certification, coursework and test scores are related to students' outcomes as if a specific formula could create a replicable ideal teacher.

As the teacher effectiveness research field has developed, many authors have warned that tight controls over teachers, prescriptive techniques and curriculum, and a reliance on quantitative data are detrimental to teachers even as these controls may be intended to highlight the positive, efficient and effective work of teachers. *What works* studies have also been criticised as "inadequate for explaining how and why internal and external conditions may influence outcomes and for explaining the relative extent of their effects" (Day, Sammons & Gu, 2008, p. 331). Connell (2009) states that it "is an extraordinarily blinkered perspective" (p. 225) that teacher quality is sensitive to policy changes but that the social background of students is not. When educational quality is reduced to test scores that do not consider social problems that affect students and narrowly defines teachers' work to their effectiveness without noting differences between teachers, the focus of policy changes on teachers' work seems myopic. Researchers have responded by looking more closely into how the career stages of teachers, their self-efficacy, adaptability, resilience, commitment and experiences are tied to their feelings of effectiveness over the course of a teaching career. While some of this literature relies on teachers' work being defined by students' outcomes, teachers' work experiences are considered, and their perceptions of schools are often included in reports alongside students' results. The prime example

of research aiming to connect teachers' experiences with students' outcomes is the largest, international education data set ever collected — The Teaching and Learning International Survey (TALIS).

Objective assessment of teachers' work experiences. Teacher effectiveness research has been criticised for excluding the experiences of teachers and focusing too heavily on students' results without context. Further statistical techniques have been developed to understand the relationships between students' assessment results and teachers' experiences at work. The Programme for International Student Assessment (PISA) test from the Organisation for Economic Co-operation and Development (OECD) is a large-scale measurement for international comparison of students. While PISA assesses students' mathematics competence, reading and science literacy, an additional component of the OECD's analysis of education is the Teaching and Learning International Survey (TALIS). TALIS is distributed to teachers and administrators in countries that participate in PISA examinations. The TALIS Teacher Questionnaire asks teachers questions about their students, which subjects they teach, their teaching time, teaching conditions, credentials and experience. There are additional questions about teachers' professional development participation, how they are evaluated, and their beliefs and attitudes about teaching. For the 2013 version, over 70,000 teacher responses were collected from 30 countries and several other sub-national entities, meaning it is perhaps the largest data set of teachers' views ever. TALIS was designed to give an objective assessment of teachers' work and experiences in schools for the purpose of relating the findings to students' test results in the same country.

The major findings of TALIS are that teachers around the world are majority female, well-educated and report feeling better prepared for teaching when they have

had formal training in education. Teachers report generally positive perceptions of their relationships with staff and students but many report problems with staffing shortages, difficulty teaching special education students and the need for more support personnel (OECD Publishing, 2014b). TALIS combines items to create scales of teachers' job satisfaction, self-efficacy and school climate. These scales are compared to each other and to overall student outcomes in a large number of publications including working papers from the OECD like *What TALIS Reveals about Teachers across Education Levels* (OECD Publishing, 2014d)*, A Teacher's Guide to TALIS 2013* (OECD Publishing, 2014a)*,* country reports highlighting findings from individual countries and other affiliated research (see Barrera-Pedemonte, 2016; Burns & Darling Hammond, 2014; Scheerens, 2010; and the TALIS Technical Report [OECD Publishing, 2014c]) .

Unfortunately, claims of TALIS measuring teachers' experiences must be tempered by problems with scales having varied statistical quality, sampling not meeting the OECD's standards in all cases, and sample weighting confined to school type and location, ignoring gender, race and other factors about teachers (OECD Publishing, 2014c). This is an immense data set but has serious limitations. Scales are related to average results for all students from a country in the main report and only in the technical reports does it become clear that the scales are often not suitable for generalisation or comparison. Beyond the technical limitations, TALIS also has several construct validity issues. While TALIS claims to examine teachers' perceptions, school climate and teachers' needs (Schleicher, 2011) the items are multiple choice and limited to a very specific view of education and the work of teachers (Sorenson & Robertson, 2018). Burns and Darling-Hammond (2014) analyse the TALIS data on the tangible aspects of work conditions for teachers, teacher

training, professional development, evaluation, certain types of teaching approaches, and teachers' feelings of self-efficacy. In the TALIS analysis, *teaching conditions* is narrowly defined as class size, teacher shortages, time for collaboration and peer observation (Burns & Darling-Hammond, 2014, pp. ii-iii) but this disregards many aspects of teachers' work. This definition does not obviously cover the full construct of teaching conditions and the exclusion or inclusion of any of the items is not justified in the research. The term *teaching conditions* is used to make statements about which countries have better conditions than others and how that relates to (or does not relate to) students' scores. Claims that teachers' conditions would improve or degrade due to changes in those aspects is not supported by robust data.

Unfortunately, without evidence that the items are representative of the realities of teachers' experiences at work, it is impossible to know if the survey accurately reports teacher perceptions or school climate. TALIS focuses on specific aspects and their frequency within serious confines, but even this often results in inconclusive data. Burns and Darling-Hammond (2014) found that variation in responses was so large that it was impossible to compare countries as "there were differences in the degree to which principals and teachers reported [each item] … with more variability in the conditions teachers reported experiencing across jurisdictions" (Burns & Darling-Hammond, 2014, p. 17). TALIS demonstrates that even the largest data set cannot capture data outside of items based on limited assumptions of what teachers' work looks like. Respondents to TALIS have little opportunity to voice their own opinion past a narrowly prescribed set of items and the questionnaire lacks any open response or follow up questions. When the outcomes of this limited list of items are then paired with averaged student achievement data, the interpretation further disregards how teachers are affected by the conditions of their workplace and the ways policy is made

manifest in school contexts. Grek (2015) notes that the OECD's reliance on countable measures has effects on education and that "we also need to critically examine what education itself becomes as a result of these processes of simplification" (p. 479). Unfortunately, the limitations of the data are used to justify more intense pressure on teachers. Torres (2009) explains how instrumental rationality has tended to drive educational reform "because it gives attention to administration, procedures, and efficiency as the prime criteria for change and progress and because it assumes that there is a common framework structuring the experience of all people" (p. 126). Teacher conditions that may be considered negative by teachers (like class size or low pay) are neutrally and objectively considered in OECD reports for their effect on students' scores while other repercussions for teachers are glossed over. Specific teaching and management styles are heavily emphasised in the data collection and related to students' scores as if those policies have no cultural or school context. Sorenson and Robertson (2017) describe the OECD as "branding and 'selling' *this specific idea of* teacher quality" (p. 118, emphasis in original). They use a trademark sign (™) behind the phrase *Quality Teacher*, arguing that TALIS frames, measures and sells their perception of quality after legitimating it through the survey. This indicates that the results of TALIS have limited possibility for understanding teachers. Rather than illuminating nuances of teachers' work around the globe, this data set frames teachers' experiences entirely around the outcomes for students, oversimplifying issues and assuming models based on results will work across contexts.

The context of schools, teachers' experiences of schools and social relations within them are absent from objective assessment research, as is the possibility that different teachers have different experiences. Consequently "in their efforts to

investigate teachers, teacher organizations, and teaching methods during the twentieth century, these authors have tended to objectify the teacher" (Altenbaugh, 2005, p. 3). The outsider and objectivist nature of asking teachers about their experiences in TALIS is aimed at understanding students' results, but not the work of teachers. This approach fundamentally distrusts teachers' perceptions and views teachers' conditions only as barriers if they are found to be related to lower aggregated test scores in mathematics, reading or science. While TALIS is a massive data set, it has severe limitations beyond the technical and delving into the very nature of how we define teachers' work.

Limits of objectivist approaches to studying teachers. Overall, the research aiming to objectively understand teachers' work, teachers' effects on students or relating their experiences at work to objectively measured items like in TALIS has severe limitations. Of concern are the implications for how we think about schools and teachers when imagining that teachers' work can be understood through objectivist and outsider methods.

Biesta (2013) examines the shift that has occurred away from talking about education practice and the people who educate students and toward talking about learning and what *learners* do. This discussion disconnects teachers and students from the structures that support learning and scenarios of where education happens. The school workplace environment is ignored except for specific measurable or comparable facets while teachers' perceptions of their work do not qualify as legitimate discussion of schools. While research claims to investigate teachers' experiences, it is often done to find out more about students, not about teachers. While much of this research claims to focus on teachers, they are treated as simply the intermediary for how numbers increase or decrease. Criticising large meta-analyses of

teaching techniques, Wrigley (2018) states the problems that "the privileging of supposedly rigorous research about the technical efficiency of teaching techniques is reductionist in its operation and implications: it simplifies the complexity of social organisation and relationships . . . blocking genuine interaction and participation in research, all the while claiming to give teachers voice and to upgrade the profession" (p. 374). Apple (2012) argues that imagining standardised tests, curriculum and effectiveness as politically neutral ways to judge education is "in service of structurally non-neutral interests served to hide from us the political and economic context of our work" (p. 18). From some objective assessment viewpoints, the way questions are asked and answered is innately distrustful of teachers' thoughts on the processes of schools. When questions about teachers allow no opinion or professional judgment "measurable quantities have replaced immeasurable qualities in assessment. Audit accountability sidesteps the personal and local, putting emphasis on the abstract and the universal. Competencies have replaced personal qualities as criteria of the good teacher" (Woods and Jeffrey, 2002, pp. 15-16). When the focus is on outcomes rather than processes or on teachers' actions rather than teachers' voices, research lacks context and teachers' accounts.

TALIS is just one example of the trend in research to treat teachers as little more than a variable in schools. Measurable qualities are reported as what makes teachers highly qualified or accomplished and then linked to students' outcomes. The development of *teacher-proof* curricular materials, approved textbooks or materials and subsequent monitoring of how closely teachers adhere to requirements becomes another measure of effectiveness, without reference to teachers' connection to the materials and students. These processes of control over teachers work "are increasingly made possible by the *datafication* of teaching, whereby the educational

process is increasingly transformed into numbers that allow measurement, comparison, and the functioning of high-stakes accountability systems linked to rewards and sanctions" (Stevenson, 2017, p. 1). This datafication can lead to measurable qualities becoming tangible and then extended past effective practices. In some cases, quality relationships between teachers and students are judged as worthwhile because of test score results (Hattie, 2008) or, even farther, teacher's feelings of self-efficacy are attributed to students' achievement (Briner & Dewberry, 2007). Analysing the variations of teachers' feelings of resilience and control over their work, Gu and Day (2007) relate teachers' feelings to students' outcomes. While this research considers some teacher attributes, the interpretation seems based on the assumptions that students matter more than teachers rather than that teachers are human beings and workers in schools. Biesta (2017) calls for an analysis of "whether what is going on in our age of measurement is getting us any closer to an understanding of what makes education good, rather than what makes it merely effective or efficient" (p. 316). The question is whether measurement serves education or if teachers are simply subservient to measurement.

The premise of judging teachers' work on their effectiveness is based on the idea that accountability practices can tell the objective reality about the quality of a teacher, school or education system. The individuality of teachers or the nuance of their experience does not exist in this paradigm where judgments are assumed free of subjective influences. Teachers' work and value within schools then is rooted in their effectiveness and their effectiveness is based principally on things that are observable and can be described in words or numbers. Salomon (1992) identifies three types of teacher responsibility: carrying out the role, learning processes and outcomes, and the long-term purpose of education including the morals purpose and value of education.

When learning processes and outcomes are emphasised over and above the other types of responsibilities, significant parts of education are omitted. As education expectations have changed to meet measurable outcomes, teachers have been expected to "set aside irrelevant principles, or outmoded social commitments, [to become teachers] for whom excellence and improvement are the driving force of their practice" (Ball, 2003, p. 223). Unfortunately, those irrelevant and outdated principles Ball (2003) characterises as lost in this drive for excellence are relationships–care and teachers' experience–may be key parts of teachers' work and what makes a school a positive workplace.

Concentration on *what works*, the amount of *value-added* or implementation of *no excuses teaching* practices, although directly related to teachers' responsibility, often ignores the effect on the teacher implementing these practices. Cochran-Smith and Lytle (2006) ask researchers to consider what the implementation of certain kinds of accountability "says, assumes and implies about teachers, teaching, and the role of teacher learning in educational improvement" (p. 669). Defining teachers by accountability measures redefines teachers' work and the public image of the purpose of teachers. Robertson and Dale (2013) note how the items of TALIS frame the acceptable and unacceptable practices of teachers even as they claim to be investigating quality teaching. They argue that the *good teacher* framed by the TALIS findings is directly linked to beliefs in a competitive knowledge economy and guides teachers to "pedagogic practices that are presumed to materialize the competent learner for a knowledge-based economy [which] limits the acquisition of those knowledges that may not be directly useful for the economy" (p. 15). Due to background assumptions behind the data collection, teachers' work is defined according to these criteria and the discourse is spread worldwide by the OECD. By

judging teachers' success on how well they can meet accountability standards, Cochran-Smith and Lytle (2006) argue that the process of teacher practice is oversimplified and ignores the "myriad complexities" (p. 667) embedded in education.

Summary of objectivist approaches. The early research about teachers and their work undertaken by sociologists focused on how teachers inhabited roles and the interaction of these roles with the workplace. The development of the field to assess teachers' effectiveness has made some improvements by investigating how teachers affect students. Unfortunately, this research has been done about teachers' work from an outsider view of what was occurring in schools. This results in viewing teachers' main purpose as increasing students' results while often ignoring the context of teachers' work and teachers' experiences. Goodson (1994) describes early sociological research that "teachers in short, were present in aggregate through imprecise statistics or were viewed as individuals only as formal role incumbents mechanistically and unproblematically responding to the powerful expectations of their role set" (p. 30). Researchers made observations about teachers within the frame of students' outcomes and what is visible in teachers' work, but potentially missed the most important aspects of teachers' experiences. While TALIS and other attempts to understand teachers at work have been undertaken, these studies tend to uncritically quantify what is countable and relate those numbers to students' achievement results. Unfortunately, these types of research and "sociological studies have tended to ignore the personal dimensions of teaching and often give an oddly inhuman account of this most human of jobs" (Connell, 1985, p. 4). Cohn and Kottkamp (1993) describe how objectivist approaches to education research have "treated [teachers] more like uniformed hired hands than professionals to whom we entrust our most precious

asset" (p. xv) and that the omission of teachers from the dialogue about education reform can only serve to exacerbate a misunderstanding of schools and teachers. Objectivist approaches sought to uphold the original ideals of sociology as so-called *hard* and *objective* science. Unfortunately, treating teachers as subjects to be observed and reported upon only results in a partial view of their work. A more subjective branch of research into teachers' work has developed alongside this focus on objective assessment. Subjectivist research approaches have been used to understand education through teachers' life histories, perceptions and personal feelings about their experiences at school to insert complexity into the discussion.

A Subjective Understanding of Teachers' Work

Research conducted about teachers through objectivist methods often excludes the perceptions of teachers and subjectivist approaches attempt to remedy that problem. In significant research pertaining to teachers' experiences', the voices of teachers are "curiously absent, or [have] been used as mere echoes for preferred and presumed theories of education researchers" (Hargreaves, 1994, p.4). The lack of agency attributed to teachers is noted by Quantz (1985) who states that researchers "have tended to treat teachers as nonpersons. Female teachers especially have been portrayed as objects rather than subjects . . . [and] seldom has the world of schooling been presented through their eyes" (p. 439). Goodson (1992) argues that research about teachers contains "a good deal of prescription and implicit portrayal but very little serious study of, or collaboration with, those prescribed to or portrayed" (p. 3) when it excludes the voice of teachers. Many researchers have investigated the lack of teachers' voice, why these voices are absent, and the potential of including teachers' voices in educational research. Grumet (2010) found that even highly experienced

teachers attending her graduate education program "had very limited imaginations for their own advocacy, frequently suggesting an appeal to a principal or assistant principal as the only avenue for their action" (p. 73). While teachers may not not be aware of their own knowledge, they are the knowledgeable figures within a school. If researchers do not use the stories of teachers, then "the languages of researchers not only deny teachers the right to speak for and about teaching but also form part of a larger network of power that functions for the remote control of teaching practice by policymakers and administrators" (Carter, 1993, p. 8). She explains that research without teachers' experiences has "largely ignored context, character, contradiction, and complexity" (p. 11) of the work by relying on objectivist methods and quantitative findings for policymaking. The exclusion of teachers' voices in previous research has led researchers to counter the problem through the development of subjectivist methods.

Questioning the usefulness of objectivist approaches and quantitative data, qualitative researchers have countered with methods intended to gather intensely personal information from teachers about their work and lives. A main approach has been to investigate the ways that teachers bring their lives to work, identifying how the structures of schools influence teacher behaviour, and investigating how teachers' experiences change in response to the conditions of schools. While other subjectivist approaches have been used to understand teachers and their work, the focus of this section is narrative approaches as they have developed around the aims of allowing teachers to talk about themselves, their feelings about their work, and their views of their workplace. This narrative research is conducted with premise that teachers at work are worth studying in their own right, not only for their effect on students. While informal interactions, individual perceptions, the mundane practices of work, and how

it *feels* to be a teacher have often been excluded from more objectivist styles of analysis, these become the foundation for understanding teachers in subjectivist approaches. Life history research asserts that teachers' narratives about their own lives and work are legitimate and contribute significant understanding about schools and education.

Teachers' perceptions of their work. In some of the earliest work highlighting the personal experiences of teachers, Lortie (1977) seeks to understand the dynamics of school organisations and how teachers are affected. Creating some of the first in-depth research on the daily work of teachers, *Schoolteacher: A Sociological Study* presents the everyday social environment of a school, describes challenges that teachers face and explains the meaning teachers feel through their work. The research also examines the historical aspects of education and how this has influenced schools and teachers. The book includes perhaps the first significant analysis of the gendered nature of schools, especially as gender relates to pay, career trajectory and responsibility in schools. Instead of relying solely on an outsider view of teachers, the research acknowledges that researchers', students', parents' and the public view of teachers is not the whole picture, placing value on teachers' experiences.

Researchers have developed subjectivist styles with the intent of humanising teachers and teaching. Ball and Goodson (2005) note that as trust in teachers and schools has declined, there has been a more urgent "need to view teachers' careers and teachers' work in relation to and in the context of their lives as a whole" (p. 8). Hansen (1995) discusses the importance of profiling not just the few best teachers, but ordinary teachers who do not consider themselves unusually effective or worthy of special recognition but who are nonetheless important figures in children's lives.

When the purpose of understanding teachers is limited to teachers' effects on students' outcomes and is based heavily on objective data, the humanity of teachers and complexity of teaching may be lost. Carter (1993) confronts the critics of narrative research, acknowledging that teachers' stories may not have quantitative precision and may not be considered scientifically rigorous. However, she argues that "these stories capture, more than scores or mathematical formulae ever can, the richness and indeterminacy of our experiences as teachers and the complexity of our understandings of what teaching is" (Carter, 1993, p. 5). Hansen (1995) notes that teachers' accounts of their work are not intended to bring prestige to the profession or demonstrate heroes, but to show the "personal and service-oriented dimensions of the practice that draw people to it, and that enable them to find success despite adversity and difficulty" (p. 2). Butt, Raymond, McCue and Yamagishi (1992) use individual teachers' stories to demonstrate the uniqueness of teachers but also the collective themes and similarities of how individual experiences interact with context (pp. 51-52). They describe the "*teacher's personal* professional knowledge" (p. 55, emphasis in original) as how teachers' input can help us to understand schools through acknowledging the personal interaction with a professional workplace. Nias (2002) points out that everyone who has attended school has watched teachers working and has a perception of teachers, but she argues that "neither pupils' nor adult observers' accounts can fully capture the lived realities of teaching as an occupation" (p. 2). The stories of teachers, their life histories and their personal narratives potentially describe schools and the education process more fully. This research may "tap into the lived experiences of teachers in schools, their successes and failures, their relationships with 'the hierarchy', their conditions of work, [and] their responses to change" (Ball & Goodson, 2005, p. 14). The focus on the subjective experiences of teachers, their

own personal histories and the day-to-day pressures of working as a teacher may allow a deeper understanding of the work than objectivist approaches.

An important aspect of research about teachers' subjective experiences has been investigating how teachers feel about their work. Teachers' narratives do not end at their students' achievement scores or a simple detailing of the events of their teaching career. Their stories include how they experience emotions related to the context of their work. In the literature, these are described as hope, passion, emotional labour, burnout and demoralisation among other terms. Kelchtermans (2005) reviews the ways teacher emotions can be seen, not from a purely individual, interpersonal or psychological attribute but as "experiences that results from teachers' embeddedness in and interactions with their professional environment" (p. 996). Nias (2002) notes that teachers need to feel included, valued, to have relationships with their colleagues and students, and to feel in control of their work. The emotions of teachers are explored by Nias (2002) as she backs off from any claim of a full sociological study of teachers, but rather aims to "present the subjective reality of teachers' working lives" (pp. 3-4). She argues that the purely outsider sociological approach fails to truly capture the lived reality of teachers because "that can only be done by allowing teachers to voice their own thoughts and feelings" (Nias, 2002, p. 2).

This emotional discussion of teachers focuses not just on what teachers do but how they feel about their work within a school context. Butt, Raymond, McCue & Yamagishi (1992) describe the relationship between emotions, context and experiences that:

> A person interacting with situations in particular contexts gives rise to experience and the evolution of personal knowledge. In order to understand how a person thinks, acts, feels and intends, and how a person knows what they know, it is necessary to understand the relationship and tensions among context and individual lives. (p. 60)

Kelchtermans (2005) argues that teachers feel vulnerable when they are out of control of working conditions like their contract, workplace infrastructure and their professional relationships (p. 997). The context of the work, including the policy environment, was found to mediate teachers' feelings of vulnerability (p. 997). This is a different kind of investigation than looking into individual self-efficacy or other individualised concepts that lack the context of work or perceptions of the teachers about their work. In objectivist approaches to research, even when teachers' emotions are included in the analysis, their feelings about their work may be devalued and treated as individual attributes. Santoro (2011) describes how "teachers' dilemmas [about what actions are moral, ethical] are rendered apolitical because they are cast as *personal* struggles rather than as revealing problems within the practice of teaching" (p. 9). Day (2004) criticises the rapid growth of research about teacher effectiveness, that it lacks an understanding of the necessity of teacher passion where "a key influence upon teachers' capacity to do this is the part played by school context" (Day, 2004, p. 134). The individualisation of teachers' feelings may ignore that emotions and emotional reactions are related to the school context and also create the school environment.

The importance of teachers' emotions as part of creating a school workplace environment is described by Nias (1996). She notes the political nature of how teachers respond to the conditions of their work that their experiences are reciprocal because "the actions which teachers take in response to what they feel affect the micro-political, social and political contexts in which they work" (Nias, 1996, p. 294). Not only does the workplace context affect teachers, but teachers affect the work environment through their emotional reactions. Woods and Jeffrey (2002) describe four emotional dilemmas that teachers face in their experiences of work through

modern school reform. First, that teachers become torn between their old values and "the focus on managerial and marketable aspects of the new teacher role" (p. 97). Second, that teachers experience loss of autonomy, lack of trust, and powerlessness, while "little attention is paid to their views" (p. 97). Third, that teachers are confronted with increasing uncertainty about their work and conditions. Fourth, that teaching has been commodified so that "consumerism has replaced care. Measurable quantities have replaced immesurable qualities in assessment . . . Competencies have replaced personal qualities as criteria of the good teacher" (p. 97). These dilemmas are teachers' reactions to their context and their reactions become critical commentary on the conditions of their work. Acknowledging teachers' experiences is not the same as reporting objective information about teachers or schools. Understanding teachers' feelings and disseminating their narratives is political. It demonstrates how teachers struggle with different pressures at work and how they feel about their work. Their reactions to dilemmas create the context of a school and can be considered a critical analysis of the context of their work.

The political aspect of teachers' experiences. Researchers who advocate for investigating teachers' subjective experiences of schools argue that the inclusion of teachers' voices about their experiences allows for a deeper understanding of of teaching and of schools. This understanding is not impartial but contains a critical and political viewpoint. Goodson and Pinar (1998) describe how personal experience is inevitably political because "the life history pushes the question of whether private issues are also public matters. The life story individualizes and personalizes; the life history contextualizes and politicizes" (p. 11). Allowing teachers to speak about their experiences is likely to lead to a discussion of power, how discourses are created, and involves the personal knowledge of teachers as professionals (Carter, 1993).

Researchers who conduct research sponsoring the teacher's voice do so with the belief that it "will resist the tendency to return teachers to the shadows; a counter-culture based upon a research mode that above all places teachers at the centre of the action" (Goodson, 2000, p. 16). Amplifying teachers' own perceptions of their work potentially challenges discourses of who is an authority on educational matters because "in a political sense the notion of the teacher's voice addresses the right to speak and be represented" (Butt, Raymond, McCue & Yamagishi, 1992, p. 57). While individual subjective experiences may vary, they seem to be related to the wider political and economic context and listening to teachers' experiences of those times may be powerful for understanding education at a certain time in a specific place (Ball & Goodson, 2005, p. 11). Teacher's narratives make the school work environment context visible and political. Researchers who aim to bring teachers experiences into a public and political discussion, "seek to continue to trouble the hegemony, by openly saying what we mean and by taking our 'private' authentic selves and voices into the public 'education' domain" (Duckworth, Lord, Dunne, Atkins & Watmore, 2016, p. 13). Instead of assuming teachers' experiences are personal or private, this previous research opens the discussion of individual experiences as indicative of larger system.

In an environment of teachers responding to policymaking, teachers' narratives and life histories have been collected and analysed to understand the repercussions of policy. Advocates of this style of research explain that narrative or life history methods are necessary before making changes to education. Bullough and Hall-Kenyon (2011) argue that without an understanding of teachers' experiences, "even the most well-intentioned of school reform efforts is likely to fail" (p. 128). They predict that, without knowing teachers' perceptions, education reform is unlikely to work when it is based on prescription without teacher input. Butt et al (1992)

describe this process whereby policies fail when "teachers were not able to participate in determining the changes that were thrust upon them. Reformers did not work with teachers in understanding classroom reality . . . [and] were ignorant of the culture of the school and classroom" (p. 53). Cohn and Kottkamp (1993) predict that education reform is doomed unless teachers are part of the process arguing that "if reform is to be successful, [teachers'] voices and views must be included in any attempt to improve and alter their work. Although their involvement cannot ensure success, their absence will guarantee continued failure" (Cohn & Kottkamp, 1993, p. xvi). A disconnect between teachers' experiences and policymakers' understanding of schools has repercussions for the effectiveness of policy. These researchers argue that life history, narrative and other qualitative methods that allow teachers to share their subjective experiences are integral to understanding schools or making informed decisions about how to change them. Putting teachers' experiences at the front of understanding schools has significant potential while ignoring them may have consequences.

Focusing on the subjective experiences of teachers often means privileging the voice of research participants. Casey (1992) asserts that "I place teachers' own understanding of their experiences at the centre of my agenda, since I believe participants can supply different, and perhaps better, knowledge of prevailing conditions than can the detached observer" (p. 188). The strength of teachers' stories is that they are grounded in contexts rather than outside of the educational environment (Goodson, 2014). Researchers argue that, when teachers' voices are part of the conversation, they can become a force that is "counter-cultural in that it works against the grain of power/knowledge as held and produced by politicians and administrators" (Goodson, 2000, p. 17). There is optimism in viewing education from

this perspective that teachers' stories, "rather than passively celebrating the continual reconstruction of teaching, will move to develop understandings of social and political construction. It is a move from commentary on what *is* to cognition of what *might be"* (Goodson, 2014, p. 33). Smyth (2006) states that we need to examine "whether teachers and teacher educators should be considered authoritative sources of knowledge ahead of those set of views held by politicians on the nature of educational work" (p. 316). A focus on teachers' voices finds that they may have a very different view of education and schools, but that it is connected to the experiences and the context.

Limits of subjectivist approaches to research. While subjective research has the potential to reveal teachers' experiences, their emotions, and how they are affected by and affect their context, there are many significant limits. Cary (1999) identifies the three main problems of life history research that it is rarely reported in a way that is contextually or historically situated, participants are not neutral in their storytelling, and that participants may tell the story the researcher wants to hear. She explains that individuals may not perceive the larger social systems that are invisibly shaping their experiences. Each person's story is historically situated, which requires a description of the context to their stories that is rarely included. Unfortunately, these issues may reduce the generalisability of their experiences. Goodson and Pinar (1998) describe how life histories can be told in a way that obscures the collective subject, "indeed a primary reliance on narratives or life stories is likely to limit our capacity to understand social context and relationships as well as social and political purposes" (p. 10). Teachers' stories during certain historical or political events or major policy changes may not be comparable with other moments in time. Life history and narrative descriptions of work are limited because of the restricted social view of each

subject. Individuals do not always have access to all the information about what affects them and may not see similarities or differences between their experiences and other teachers' experiences. Researchers using ethnographic methods or insider-style methods do so as a counterpoint to the objectivist approaches typical of early sociological studies. Unfortunately, because of the trust put in subjective experience, teachers may tell stories to please the interviewer rather than tell what is occurring or say things contrary to what is observable. Goodson and Pinar (1998) acknowledge the limits that teachers' lives change over time and that individual pieces of a story may not tell the full story (p.10). These limits have potentially led to narrative methods not achieving the same general appeal that quantitative methods have for understanding education.

While narrative life-history research has been a primary example of research critical of traditional sociological research, scholars have developed other critical approaches to understanding how teachers' work is influenced by larger social and cultural influences. Instead of citing a lack of neutrality as a limit, critical research has developed to intentionally take a position from which to criticise the workings of an organisation. These have taken two distinct paths, a structural Marxist approach to analysing the labour process of teachers and a post-structuralist account of teachers' work.

Critical Analyses of Teachers' Work

While subjective experiences and objective assessment are often portrayed as a dichotomy of how research can be conducted, critical approaches can be considered as a *third way* that incorporates aspects of both objectivist and subjectivist research approaches. Critical perspectives are more suited for understanding mechanisms,

analysing context and evaluating processes that influence individual and group experiences. Critical research about teachers' work has been conducted through structural analysis and post-structural thinking as well as through analysing teachers' work in the context of larger forces of marketisation. A particular type of critical analysis reviewed at the end of this section is feminist critical analysis.

Structural analysis: Teachers' work and Labour Process Theory. The previous sections included analyses of teachers' work as individual experiences or seeing teachers as a group but at the expense of viewing teachers' work as embedded in the broader context of the social world. Quantitative analysis is often used to objectively describe the similarities between teachers through international comparison but may miss the context of their work. While subjectivist approaches have included context and teachers' emotions, there are several major shortcomings. Robertson (2000) criticises the approach of collecting narrative stories of teachers and their daily activities in a classroom stating that it has "suffered in that it focused attention upon the world of sense, impression and events rather than the underlying social relations and social structures which gave rise to these events" (p. 287). She praises labour process theory as advancing the understanding past what is immediately obvious to an individual teacher and looking closer at the broader social patterns that affect teachers and their work. Ozga (1988) argues that we need to develop a better way to understand teachers' work by seeing "teaching as *work* and teaching as a labour process" (p. viii, emphasis in original). She argues that labour process theory is the key to conducting structural analysis of teachers' experiences in schools.

Labour process theory (Marx, 1976 – first edition in 1867; Braverman, 1998) was conceived to explain social changes due to factory-style industrial production

models which affected the evolution of the organisation of work in capitalist systems. The capitalist model requires that business owners extract the maximum amount of labour from their workforce for the lowest cost. Labour process theory describes a system in which work is controlled, wages are depressed, work is intensified, and societal class divides are exacerbated as management divides workers. Labour process theory can be used to integrate analysis of how broader social conditions affect teachers into understanding their experiences at work. Tipton (1988) acknowledges that schools do not function in the same manner as industrial production but argues that we get "no realistic picture of schooling" (p. 6) without viewing teaching as work and teachers' work as subject to de-skilling, intensification and loss of control. Ozga and Lawn (1988) describe how the Taylor (1911/2004)-ist management methods occur in teaching when teachers' work is broken down into "separate, controllable, simple parts. This process de-skills the worker, and results in the erosion of workplace autonomy, the breakdown of relations between workers and employers, the decline of craft skills and the increase of management controls" (p.324). They argue that, when the execution of teachers' work becomes separated from the conception of why the work is done or for what ends, teachers lose control over their work, their understanding of the processes of education and, consequently, work relationships suffer (Ozga & Lawn, 1988, p. 324). The increase in different technologies that structure work, like hierarchy, organisation, schedule, curriculum or accountability measures, are identified by labour process theorists as taking control away from teachers. Ferguson (1984) explains that control over workers is "embedded in the work process itself and in the organizational vocabulary through which the work is defined" (p. 87). She describes how these embedded controls are identifiable through how teachers and their work are labelled as well as the activities and expectations of

workers. These controls are especially effective "not because they directly coerce workers but because they narrow the possible universe of discourse to a small number of options" (Ferguson, 1984, p. 87). As part of a labour process, the conditions of teachers' work define how work can be done and influence how teachers behave in schools.

Labour process exists in teachers' work as the workforce is divided up into different types of teachers (e.g. heads of department, teaching assistants, etc.) who are treated differently and access different types of responsibility, control and rewards. Carter and Stevenson (2012) describe the change from "an organisational structure with some basis in a shared professionalism towards one based much more on the management of performance in which managerial roles become more explicit and rewards are linked more closely to performance" (p. 113). Labour process theorists explain that when hierarchies are formed to divide leadership from different levels of teachers and support staff, a division of labour occurs. Parts of teachers' work are redistributed to other staff with responsibility and management tasks given to leadership positions and other – often lower prestige – parts of the work like pastoral care are given to support staff. There are repercussions of the division between types of worker as "the consequence is an increasing hierarchy in which those at the lower end lack status and security" (Carter & Stevenson, 2012, p. 140). Griffiths (2006) argues that the division of labour in schools tends to be gendered with value given to masculine tasks that are "individualistic, competitive, performative, calculative, and hierarchical" (p. 402). This creates a hierarchy where teachers' non-teaching tasks may be re-assigned to support staff who can be paid less. This division of labour reduces the cost of labour by dividing work and delegating less rewarded work to flexible and insecure workers. A significant effect of this division of labour in a

hierarchy may be the intensification of teachers' work when parts of their work are re-assigned to other workers so that they can take on more teaching. Intensification occurs because "stripped of the elements of the job that provide 'breathing space' . . . teachers' work is increasingly accounted for by the high-pressure, high-intensity elements" (Stevenson, 2007, p. 237). As support staff are given less responsibility with the least important work, they may become detached from the vital work of the schools and are in an insecure role because they may be easy to re-assign or fire. Sinclair, Ironside and Seifer (1996) describe the attractiveness of the system of hierarchy as "this model is said to enable managers both to increase efficiency by driving down labour costs, and to raise productivity through the more intensive use of the best qualified staff" (p. 655). This is particularly interesting when schools are operated not simply to get the most work for the least amount of money but to make a profit. Schools can exemplify the labour process of increasing more work for a lower labour cost through hierarchy, division and intensification.

While the labour process seems to occur in teachers' work, it does not fully explain the school as a workplace. Reid (2003) argues that the work of Braverman (1974) has been oversimplified to the point that it seems deterministic. While deskilling and hierarchy demonstrably occur in schools, larger issues of control over work need to be addressed. Reid (2003) argues that the key to understanding how labour process affects teachers is to identify how teachers' work is controlled and the purpose behind exercising control over teachers. The aspects of labour process theory related to extracting the most productivity out of teachers for the least amount of money involve administrators who manage and assess that productivity. Studying teachers' work inevitably revolves around questions of control and the tension between the authority of management and teacher autonomy (Stevenson, 2017).

Ingersoll (2009) describes how control and accountability are exerted over teachers in many ways, embedded in daily organisation of the work and often invisible to outsiders. Workplace expectations and precedents mean that "teachers in most schools are subject to a great deal of constraint through a variety of both formal and informal modes of workplace control" (Ingersoll, 2009, p. 13). Informal or indirect controls might appear to be autonomous decisions by workers because the most intense controls are often exerted in less visible ways than overt controls (Perrow, 1986). Ingersoll (2009) describes the political nature of control over teachers' work including the concern over how much control teachers have, the power they have over the content they teach, the freedom of teachers to decide the process of education and how teachers are held accountable. Ingersoll (2009) argues that taking control away from teachers is not simply due to intense concern about students but "because schooling is so crucial that there has always been much controversy over who controls what teachers do" (p. 5). When education is seen as a political act of socialising children into society, giving teachers control may seem ill-advised. Au (2011) describes how Bobbitt (1913) pushed scientific management principles into education, furthering the idea that students could be produced like a commodity according to certain standards. Bobbitt (1913) argues that "the burden of finding the best methods is too large and too complicated to be laid on the shoulders of the teachers" (pp. 52-53). In this view, the labour process of teachers is justified as the most effective way to gain outcomes for students. Teachers' loss of control over their work seems like a small price to pay when efficiency and cost effectiveness combine with ideal student achievement. Furthermore, teachers are cast as unworthy of control over their work, not believed to have the necessarily expertise, and charged with simply implementing the best methods dictated by their administrators.

For teachers, the issue is likely not only a struggle over control, but that teachers' interest in control is due to the nature of the teaching. Connell (1985) argues that discussion about education often leaves out the interest that teachers' have in their jobs and the purpose they find in their work. She describes why teachers have an interest in control over their work:

> Teachers, like other workers, have a legitimate interest in the *content* of their jobs. They have an interest in doing socially useful work, in having a satisfying work experience, in not being under destructive personal pressures, in having space to be creative and exercise their skills. They have a legitimate interest in the *control* of their workplaces, in not being subject to other people's control without their consent, not being pushed around, having the opportunity and resources to make decisions collectively for themselves." (Connell, 1985, p. 203, emphasis in original)

However, to engage with this argument, the reader must believe that individual teachers are worthy of control, discretion and power in schools. In structural analysis, the agency of individuals is not always part of the discussion. While integrating structural analysis into the understanding of how teachers are controlled in their work clarifies the process, it sometimes ignores the individual experiences of teachers. The next section describes how researchers have analysed control and power in workplaces without presuming that they are simply subject to it. This includes the interplay of how teachers both react to policy and enact policy in schools,

Post-structural analyses of teachers' work. Compared to structuralist view –that large theories related to capitalism and a class-based system can be used to analyse work– post-structuralist analysts reject the notion of a grand narrative that can define all people. Post-structuralist researchers have raised concerns that structural analysis of schools has a *missing subject*, where teachers seem to lack knowledge and agency. If labour process is believed as the defining theory of teachers' work, then teachers are assumed to be at the mercy of that system. For post-structural theorists,

teachers have agency and are shaped by the social influences around them. Further than narrative research, post-structural analysis integrates teachers' own experiences with factors that may be beyond what is perceptible by an individual teacher. In educational research, this approach has been particularly influenced by the works of Foucault (as analysed by Ball, 2013) and the methods of ethnography, deconstruction and genealogy, a *history of the present* (Ball, 2013). This research often takes the approach of criticising education reform based on teachers' accounts of working in schools. Education policy is analysed for how it is written, enacted in schools and shapes the individual teachers within schools. Ball (2013) uses the words of Foucault to describe how the *body* of the teacher is shaped through the policy environment of their school. With the post-structuralist approach, "thinking about education policy in this way we have to both materialize the schools, as architecture and organization and attend to the schooled body, the ways in which school and policy are written onto the body" (Ball, 2013, p. 29). Education policy affects schools and teachers in ways that may be hidden if the analysis focuses too strongly on the prevailing conditions rather than understanding it through individuals' experiences. In post-structural organisational theory, researchers describe the diverse experiences of members of organisations. Calás, Smircich and Bourne (1999) describe the main conceptions of post-structural analysis as "incredulity toward metanarratives, the undecidability of meaning, the crisis of representation, and the problematization of the subject and the author" (p. 650). They investigate how language in an organisation affects the knowledge of organisation members and the relationship between those two facets.

The main themes of post-structural education research, framed by Ball (1997, 2003, 2010, 2013) are that changes in schools have led to teachers to struggle with issues of power, subjectivation, governmentality, performativity, and surveillance. The

analyses investigate how teachers experience power in schools, finding that the social patterns of co-workers, supervisors and other people who affect the work in schools are interactions that constantly shift the balance of power through small points of control. In their everyday actions, teachers negotiate how their work is controlled, how they share control with other workers, and which control they relinquish (Ball, 2013). The "'the microphysics of power' are individual choices, interactions and behaviours (tactics) that together produce more general social patterns (strategies)" (Ball, 2013, p. 31). While teachers experience surveillance from administrators, parents and students, this in turn is hypothesised to cause "subjectification" (Ball, 2003) when teachers re-make their identities to fit what is expected of them. Gewirtz (1997) identifies how this process results in "transforming teacher subjectivities" (p. 219) as teachers respond to the conditions of their work. While there are primary effects intended by mechanisms of control –like improved instruction practice– there are also "second order effects" (Ball, Maguire & Braun, 2012) that may be negative and experienced more powerfully by the teacher than the intended effect. These mechanisms of control may combine to govern the activities and choices of teachers. Teachers are described as experiencing *governmentality* when the expectations of them limits their actions and how they fit into an organisation (Davies & Bansel, 2007). As teachers are increasingly performing to meet targets, changing how they think about themselves to fit expectations, and limiting their view of their work based on the way they are governed, their identity is affected. Ball (1997) describes how teachers are redefined through their use of accountability systems "by the narrow and superficial rewards and identities that this delivers through a regressive self-regulation … the attractions of corporate culture involves a giving up of or restriction of self or the substitution of an organisational subjectivity" (p. 326). Instead of teachers judging

their actions according to an internal purpose, they may feel pressed to be driven by increasing their status in the systems that govern them. Ball (2003) describes the transformation as "performativity" when teachers "organize themselves as a response to targets, indicators and evaluations. To set aside personal beliefs and commitments and live an existence of calculation. The new performative worker is a promiscuous self, an enterprising self, with a passion for excellence" (p. 215). While performativity works best when teachers "want for ourselves what is wanted from us, when our moral sense of our desirers and ourselves are aligned with its pleasures . . . A self-maximizing productive unit operating in a market of performances" (Ball, 2013, p. 140-141), as performativity is ingrained through surveillance. Teachers are encouraged to surveil themselves according to targets and are watched through increasing accountability measures, but this comes at a cost. With the focus on impressions and image, teachers may find that an orientation towards performance "changes the way in which they experience their work and the satisfactions they get from it – their sense of moral purpose and of responsibility for their students and for 'truth' is distorted" (Ball, 2010, p. 126). Ball's discussions of power, subjectivation, governmentality, performativity, and surveillance describe an individual process within school systems. This has been further refined by other researchers.

Gewirtz (2003) takes a similar view of understanding schools through the experiences of teachers but uses a different framework to describe how teachers' work has evolved. She describes teachers' experiences based on Young's (1990) evaluation of social justice issues. She explains how teachers experience exploitation, marginalization, powerlessness, cultural imperialism and violence through school reform. When teachers' work has been intensified to fit targets and aims, "they have had to be more productive to serve other people's needs whilst deriving less personal

fulfilment from their work" (Gewirtz, 2003, p. 147). She suggests that teachers may become preoccupied with the technical aspects of their work which marginalises them through exclusion from active participation in decision making. Consequently, teachers can experience powerlessness when they "have lost control of what they teach and the determination of the goals of their teaching" (Gewirtz, 2003, p. 150). When teachers are marginalised and powerless, feelings of cultural imperialism affect them. Teachers then experience their work based on how more powerful groups assign meaning to them, rather than the culture of teachers and, consequently, teachers are 'othered' (p. 152). Teachers then may experience ridicule, degradation, humiliation and stigmatisation. These analyses demonstrate the importance of looking at the consequences of policy on teachers and how changes to teachers' work goes beyond the effect on students.

The overall themes of post-structural analysis are related to teachers' individual struggles with subjectivity and power, but the analysis does not assume these struggles are caused by specific structures. This field has recently been developed to include contemporary globalisation trends and the effect on education. Ball's more recent work has focused on global education policy and the involvement of corporate actors in education management, policy and discourse. Ball (2013) states that, where the logic of business has influence, there is a "transformation of social relations and practices into calculabilities and exchanges, that is into the market form — with the effect of commodifying educational practice and experience" (Ball, 2013, pp. 131-132). Ball and Youdell (2008) describe endogenous and exogenous privatisation of school and how this affects teachers' experiences at schools. While these investigations use methods like genealogy and policy ethnography, they go

beyond post-structural approaches to also identify the influence of larger social structures on the conditions in schools and the effect on teachers.

Teachers' work in the context of marketisation. The critical analysis of teachers' work within broader social constructs has focused on the effects of marketising education. Ball (1998) highlights how market ideologies have become a primary influence on education policy and how teachers are controlled through market-like practices. Researchers have begun to track the transformation of teachers' work in connection to how "marketisation affects what is taught and learnt, who learns and how, and the social meanings and outcomes that are attached to education" (Marginson, 1999, p. 231). The term *marketisation* describes what happens when something exists as part of a market or is subjected to market forces. In education, marketisation has been used to describe a range of behaviours of educational governance and system level decision-making (Whitty and Power, 2000), the pedagogical implications of marketisation (Ylöstalo and Brunila, 2018) and even of the different types of commercial activity that can be conducted within a school (Molnar, 2006). Marginson (1999) defines marketisation as when education institutions take on "behaviours typical of corporations operating in an economic market" (p. 229) and calls for research to explore "to what extent does market discourse affect the ordering of education systems and the daily practices of professional educators and other participants?" (Marginson, 1999, p. 235). Whitty and Power (2000) suggest that marketisation is often defined as the shift in funding of education from public to private. However, this definition may underestimate the extent to which decision-making about education has been influenced by market ideals. Market ideologies would include preferring market-based solutions to education problems, private sector operation styles, doubt in the capability of the

public sector, and belief that more competition between schools with parental choice necessary. Whitty and Power (2000) describe the push for schools to become even more market-oriented as proponents of academies, charter schools, vouchers or public private partnerships push "further towards more genuinely marketised and even fully privatised forms of education provision. Indeed, some advocates of market forces have argued that the indifferent performance of the reforms so far is merely evidence that they have not gone far enough" (Whitty and Power, 2000, p. 103). When marketisation leads to "the remodelling of the ideal educational institution as a corporation" (Marginson, 1999, p. 233) the question then becomes "to what extent does market discourse affect the ordering of education systems and the daily practices of professional educators and other participants?" (Marginson, 1999, p. 235). The literature about marketisation describes the ways that marketisation transforms what teachers do, alters their beliefs about education practices, and affects relationships within a school.

A significant amount of literature theorises the ways that teachers' work is changed when schools and teachers are subjected to market forces. Even within schools that are public institutions, Smyth, Dow, Hattam, Reid and Shacklock (2000) identify how teachers are pressed to "encase schools within the ideology, practices and values of the business sector" (p.1). Researchers find that integrating the "values of the performance-driven markets" (Gewirtz, 1997, p. 224) into school results in changes to how teachers are evaluated, how their work is regulated, how much time they spend monitoring students and recording data, and the effort spent meeting targets. Marginson (1999) identifies market-like practices embedded in teachers' work as schools integrate "more intense competition, more professionalised management, tighter accountability of measured outputs, greater efficiency pressures, and so on"

(pp. 236-237). Marketised practices are particularly evident in schools in how teachers' work is controlled (Ballet, Kelchtermans & Loughran, 2006, p. 210) and the work becomes "more concerned with what can be recorded, documented and reported about teaching and learning than it is with the educative process itself" (Codd, 2005, p. 201). The work of teachers is found to be transformed to be aligned with business-like operations as marketising practices bring along a set of standards and expectations that influence education.

Through market-like practices, the purpose behind teachers' work and teachers' beliefs about education may be fundamentally altered. Cribb and Ball (2005) point out that assuming that business-style practices will benefit the work of teachers "rests upon the misguided assumption that educational goods can be 'delivered' by any mechanism, and the failure to see that mechanisms 'make' or 'break' the goods in question . . .[but it is] not just a new technical system of delivery, but comes with ethical baggage of its own, which changes that which is being delivered" (p. 126). They make the connection that altering the *process* of education may also alter the *product*. Gewirtz (1997) describes how the so-called *ethical baggage* of business affects teachers because:

> Markets, target setting, performance monitoring and inspection, are not neutral mechanisms for 'improving' schools. They have embedded within them a set of values about what education is and is for. They function as powerful disciplinary mechanisms for transforming teacher subjectivities and the culture and values of classroom practice. (p. 219)

While teachers may feel a tension between their values for education and market values (Lundstrom, 2011), through accountability and appraisal systems that regulate teachers' work, "performance-driven markets are institutionalised" (Gewirtz, 1997, p. 225). Research into this finds that, in a marketed system, teachers choose their action and judge their activities "on the basis of their contribution to

organizational performance, rendered in terms of measurable outputs. Beliefs are no longer important—it is output that counts. Beliefs are part of an older, increasingly displaced discourse" (Ball, 2003, p. 223). The marketisation of schools seems to change teachers' practices, teachers' beliefs about the system and may also change teachers' experience of their workplace.

Researchers study the repercussions of these changes on the social atmosphere of teachers' workplaces. Gewirtz, Ball and Bowe (1993) have found that "political market-oriented restructuring of the education system has implications for the values and cultures which operate within schools (p. 233). Competition between staff, surveillance, and commercial decision-making were found to cause rifts in social relationships of teachers as interactions between colleagues became focused on school business and individual survival. Feelings of a common purpose and teamwork were displaced as teachers experienced the "'de-socialisation' of staff relationships" (Ball, 1997, p. 325). In a marketised environment, teachers' "notion of 'service', the investment of the self within practice, and professional judgement related to 'right' decisions, are relatively devalorised" (Cribb & Ball, 2005, p. 121). Teachers' perceptions of market influences on their work may clash with teachers' fundamental values about the purpose and process of education (Smyth et al, 2000). Brown (2003) argues that when "thinking and judging are reduced to instrumental calculation in this 'polar night of icy darkness'—there is no morality, no faith, no heroism, indeed no meaning outside the market" (para 20). She argues that this has led to "the erosion of institutions, venues, and values organized by non-market rationalities in democracies" (para 7) including education. Post-structuralist researchers have revealed the complex nature of how individuals mould themselves to fit into work expectations with repercussions for their identity and values. In the context of marketisation, this

interplay between individual decisions and workplace expectations is particularly interesting.

Limits of post-structural analysis. Even as these types of analysis recognise the influence of larger structures of marketisation, the reasons for the varied effects on teachers' work seems elusive, especially when individual characteristics are left out of the analysis. The risk of post-structural analysis is that researchers get sucked into the "quicksands where 'nothing' appears to govern, structure or provide meaning in the social world" (O'Dougherty & Willmott, 2001, p. 464). Mayo (2000) describes how researchers have used post-structural analysis but failed to recognise how and why subjects are *constituted* because they are focusing too heavily on giving an account of their *constitution*. She describes the problem where "narrative-based research may tend to leave the subject's account of his or her subjectification under-scrutinized" (p. 105). Workplace structures and social factors like gender or race stay outside of critique if participants are slotted into "entrenched categories" (Hodgson & Standish, 2009, p. 324). When the focus of research become too focused on individual identity, the structural problems in education may be lost in the "narcissistic tendency that often accompanies current readings of poststructural thought" (Hodgson & Standish, 2009, p. 320). Post-structural research is often criticised for being too concerned about the idiosyncratic that it may not be a representative portrayal of schools or of the wider experience of teachers (e.g., Tooley, 1997). Generalising across a group of people without insight into their individual experiences is likely to miss important idiosyncrasies of experience. On the other side, unproblematically accepting teachers' statements without looking at the other influences –like gender and national origin– may lead to contradictory results. The identification of these issues has led to a hybrid approach.

Moving the analysis beyond Structuralism vs. Post-Structuralism. While structural and post-structural analyses each have their strengths and weaknesses, Apple (2013) suggests that "it is where these traditions 'rub against each other' in tense relationship with each other that progress can be made" (p. 209) and praises Ball for applying this approach in some research. Ball (1994) describes how education policy is not one-sided and cannot be limited to what those in power dictate. It is not simply dominance and resistance, there is "more to classroom life than this, a third space — other concerns, demands, pressures, purposes and desires" (p. 11). In this space between, the interplay between structures and individual agency is addressed. Giddens (1982) explains that workers are not simply rational actors, but that power relations and the interconnection of power and the ability to act in a workplace influence how people behave. Giddens also explores how the ways structures affect people are also different based on class. Apple (2013) describes how structures that limit workers are always present and that these structures have political implications as bright as neon signs (p. 210) but that politics should be thought of as "embodied, as lived out in daily life in the interactions of real (classed, raced, gendered/sexed, nationed) people as they go about the mundane –and sometimes not so mundane– relations that reproduce and produce these structures and their effects" (p. 210). One very notable group moving beyond the structural and post-structural debate are feminist critical scholars.

Feminist Critical Analysis

Synthesising structuralist views like labour process theory with feminist and post-structuralist thinking that acknowledges the "missing subject" (O'Dougherty & Willmott, 2001) allows for a different perspective on the workplace and its influences

on workers. This hybrid approach offers options for considering the individuality of the participants within the larger social structures of society and their workplace. O'Dougherty and Willmott (2001) call for hybrid analysis, informed by post-structuralist insights, and within the tradition of sociological and labour process research. They describe looking at subjects within structures in "that difficult space where work organisation gets produced and reproduced in the everyday accomplishments of agency and social interaction" (p. 459). They analyse work through the "processes of constitution, translation and mediation between capitalist market pressures and managerial strategies" (p. 460) to understand the influences on workers. Feminist analysis has the potential to set the framework for this kind of hybrid analysis.

Throughout the evolution of research on teachers' work, gender theory has been present. Even in Lortie's (1977) discussion about teachers, gender was a defining issue of the analysis and Gouldner's (1957) work described the importance of recognising the gender of workers. While significant research examines the various meanings of the feminisation of teaching (see Altenbaugh, 2005; Coffman, 1911) these analyses do not automatically bring clarity to understanding the work of teachers, especially in marketised contexts. Moreau, Osgood and Halsall (2005) demonstrated that although teaching may be female dominated, that does not automatically mean it is *female friendly*. Marshall, Johnson and Edwards (2017) describe that women are an increasing majority of teachers but a minority of school leaders even while teaching is considered a profession that gives equal opportunities to men. This is partially because there is still a gendered division of labour in teaching (Coffey & Delamont, 2000). Within schools, researchers have traced the history of the

profession and current expectations for teachers, then reviewed them through a gendered lens.

In an analysis of schools and school contexts, "a strategy (or conversation, activity, behavior) is 'gendered' when particular socially or culturally shared understandings about relationships between men and women inform it" (Biklen, 1995, p. 2). It is not the sex of participants, but the ways that people experience "the bases of inequality, the shape and degree of inequality, organising processes that create and recreate inequalities, the invisibility of inequalities, the legitimacy of inequalities, and the controls that prevent protest against inequalities" (Acker, 2006, p. 444). Feminist critical analysis views how workers "are formed and reformed through social processes, how they act, how they experience their working life (as well as their private life), how they are supported and discriminated — but will also include a broader view on organizations" (Alvesson & Billing, 2009, p. 8). Gaskell and Mullen (2006) describe that "teaching, like all occupations, has been organized, changed and framed by gender. It has been organized in a way that associates the teaching women do with low status and income, while the teaching men do garners more power and esteem teaching jobs have been continually reorganized and redefined so that women remain in low status positions relative to men" (Gaskell & Mullen, 2006, p. 453). While they use the terms *men* and *women*, their point is that even though teaching is one of the most common professions for women "these figures, however, disguise stark patterns of vertical and horizontal segregation in the teaching profession" (p. 454-455). Duckworth, Lord, Dunne, Atkins and Watmore (2016) argue that education policy is "intensifying a culture of hegemonic masculinity in schools, whether or not they have a majority of women teachers" (p. 6). They found that the effects were not

based on the number of women in a school, but that the gendered nature of the marketised culture of education reform affected all teachers' experience their work.

Feminist critical analysis of workers integrates structural understanding alongside acknowledging the individuality of people within these organisations. Feminist analysis can be used to understand teachers' work in marketised contexts and to increase the usefulness of Labour Process Theory. When gender and the gendered nature of work are included in the conceptualisation of labour process theory, the exploitation of workers, especially female workers or non-technical workers becomes even more relevant. Mies (1999) describes how work that is not seen as *productive* or directly income generating is generally lower paid, subordinated or exploited when described as *activity* or *natural* and when the workers are expected to stay out of politics, industrial action and organisation (p. 116). She uses the term *housewifisation* to describe people whose work can be cheapened, especially women and people from developing nations. This term describes a stereotypical situation where one partner is earning a living wage, so the work of the so-called *housewife* is an avocation from which no real wage is necessary to support the family. Acker (2004) also describes the ways that productivity increases are often accomplished by hiring women, especially immigrant women, frequently from developing nations and paying them low wages. She argues that inequalities between different types of teaching work are naturalised as "claims to non-responsibility [for inequality] reinforce the underlying gender divisions between production and reproduction and the gendered understructure of capitalist production, as they continually relegate reproduction to the unpaid work of women or to the low paid work of women in the for-profit economy" (Acker, 2004, p. 27). Peterson (1996) describes the ways this is not only a problem for women and is not constrained to positions that are considered gendered, but also happens to both

male and female workers in transnational business. Hierarchies of employees, increased international competition for jobs, and flexible labour practices suppress wages while diminishing the feelings of security and control over work similar to housewifisation (Peterson, 1996, p. 11). Dunford and Perrons (472) describe how businesses overcome the difficulty of making profit in the care sector "by employing workers disadvantaged in the labour market on low wages" (p. 472). In international schools, class divisions between locally hired and internationally hired teachers institutionalise and normalise wage differences and unequal working conditions (Tarc & Mishra Tarc, 2015). Acker (2012) describes how, even when pay scales are standardised, the segregation of wages by gender, class and national origin are part of "a culture of denial and invisibility of inequities perpetuates the inequities. These cultural processes support the continuation of structuring practices that produce inequities and often undermine attempts at organizational change" (Acker, 2012, p. 216). Feminist analysis brings another dimension into the discussion of teachers' work, integrating structural theories with the individual lived experiences of people and has implications for how organisations and teachers can be studied.

Feminist analysis and the implications for the study of teachers' work. Feminist critical analysts combine structural and post-structural analysis through emphasising how voice and theories of knowledge are important in the discussion of marketised contexts, especially when researching teachers. In marketised contexts, the origin of knowledge and whose perceptions are considered *knowledge* become key questions. As mentioned in the introduction, researching marketised contexts is difficult when the "discourse of competition, markets and choice . . . accountability, performance objectives, [and] standards . . . have created such a din that it is hard to hear anything else" (Apple, 2000, xii). In situations like education, where a market-

based approach has been generally accepted, feminist critical scholars examine how "what counts as meritorious will have already been defined by those in power and taken as the norm and, hence, is unlikely to be subject to critical assessment and change" (Calás, Smircich & Bourne, 2009, p. 556). Duckworth, Lord, Dunne, Atkins and Watmore (2016) identify the ways that "gendered discourses and masculinized cultures of performativity" (p. 1) close down questioning and debate among educators "through a variety of neoliberal working practices variously experienced as marginalising, silencing and alienating" (p. 1). When the logic of business is accepted as a natural pattern useful for schools, other more powerful voices may be elevated at the expense of the voice of teachers. Using feminist theory, Boler (1997) describes how the voice of workers is suppressed when through "existing gender and race relations we are taught, for example, not to question the rule that those with less power cannot afford to express anger toward those with more power" (p. 226). Duckworth et al (2016) found that, when spaces for teachers to comment exist in the form of meetings or surveys, "these spaces are gendered and constraining, and reduce the potential for change arising from such spaces" (p. 5). In situations where there was increased political and public involvement in discussion about schools, Lefstein and Perath (2014) found the result of "the marginalisation of teachers' participation. This outcome is doubly problematic: as the adults closest to classrooms and schools, teachers possess critical knowledge and expertise about the issues under discussion" (p. 33). Teachers may be marginalised in debate about education are they may not be considered authorities, especially as they are considered less influential workers in schools. Code (2014) describes the attributes of marginality:

> Marginality has many aspects. At the very least, it includes being left out as known or knowable and being left out, side-lines, as a putative knower; being diminished or damaged by/in bodies of knowledge; being denied credibility in testimonial and other epistemic processes and practices; being discredited

> within a certain hegemonic formula or set of directives for what counts as bona fide knowledge. Although these aspects may appear to operate singly in some instances, often they overlap or are interwoven in silencing, ignoring or discrediting certain voices and points of view. (p. 14)

The marginalisation of teachers' voices and knowledge within organisations is documented by feminist critical scholars and has implications for research about teachers and schools. When narrowly defined expectations for what is considered proof based on marketisation principles "have become understood as the rightful occupants of research spaces. [consequently] Those people who might offer different accounts of the world are in danger of being illegible and inaudible to the quality apparatus of the global academy" (Morley, 2016, p. 34). Feminist critical analysts note that, in this relationship, other knowledgeable people like teachers are reduced to "procedural knowing," "received knowing" or silence (Goldberger, 1997, p. 254). The consequence of marginalising teachers' voices in research may be a loss of voice, the loss of knowledge and the loss of the point of view. Alvesson and Billing (2009) found that the kinds of questions raised and, in turn, the answers that came from research were lacking because "some subjects have not been considered at all or they have at least not been considered from a gender point of view" (pp. 6-7). When certain subjects are not considered, the hidden position in "established research is presented, and may for the 'naïve' reader appear, as objective and neutral" (p. 7). This may explain the large amount of research about teacher effectiveness and students' outcomes that is apparently neutral but is hiding specific expectations of teachers related to market-based notions of what is valuable. Unfortunately, "research which accepts the terms of market reform cannot place it under sufficient critical pressure to enable a full evaluation of the long-term historic costs and benefits" (Marginson,

1999, p. 237). Feminist critical theories attempt to remedy this problem by including knowledge from women or marginalised groups like teachers in their analysis.

When feminists speak about the origin of knowledge the term *knower* is often used because research can then include people knowledgeable about their circumstances who may not be considered authorities based on their power. The term *authority* subtly describes a power relationship, that those in power have authority and then are counted as authorities on a subject (Goldberger, 1997). Feminist critical analysts recognise that, historically, teachers have not always been considered authorities, rarely have had the power to be influential or have loud voices in discussion, even when it is about schools. The nature of education in marketised contexts has implications for what we know about education and how it can be studied. The feminist critical position is further discussed in Chapter 3.

Literature Review Conclusion

Reflecting on the literature about teachers' work, the different theories of knowledge fit with the different traditions of studying teachers' work. Gunter (2005) describes five variations of theories of knowledge: technical, practical, illuminative, positional and critical. Early sociologists studied teachers from a technical perspective, reporting on the conditions of their work and the characteristics of teachers. School effectiveness literature has centred on the practical, analysing how teachers' work can be made more efficient to increase the outcomes for students. Research can illuminate the lives of teachers when it looks at their life histories, their interactions in schools and the meaning behind teachers' practices. The post-structural analysis of teachers' work and labour process theory analysis take a positional approach to understanding schools. A critical approach may incorporate facets of

these other approaches, but also includes analysing the power relations, hierarchies, the role of gender, national origin and race as significant to understanding schools.

The different approaches to studying teachers' work have included qualitative and quantitative approaches to data collection and analysis with varying degrees of success in integrating teachers' experiences and perceptions in the work. When objectivist approaches to studying work are used, teachers' feelings and perceptions are lost. When subjectivist approaches are used, larger structural forces and trends are not identifiable. The critical approach, especially in the feminist space between structural and post-structural criticism, seems to integrate the most interesting points of labour process theory and allows for interesting investigation into teachers' work in the context of marketisation.

This has implications for the methods chosen because a gendered perspective on what occurs in organisations, how gender plays out in schools, and then whose voices are heard about experiences within an organisation become prominent analytical issues. A feminist analysis of teachers' work in marketised context starts at the point of recognising whose voices are heard and how teachers' perceptions of schools can lead to critical analysis that will be understandable by policy audiences.

Chapter 3: Methodology

As demonstrated in the literature review, understanding teachers' experiences can be accomplished through an array of methods. Each set of methods to investigate teachers and their work is accompanied by a set of beliefs about knowledge and how the world can be understood. While this study is framed around teachers' experiences, which could be a purely qualitative investigation, a significant part of this research is quantitative data collection and analysis. A feminist epistemological approach was used for this research and this stance on knowledge had implications for the methods that were chosen and the procedures of how data was collected and analysed.

A mixed-methods process guided by feminist principles of research is presented in this chapter as a novel way to investigate teachers' work. It is a journey of discovery of how these views about knowledge and this set of tools can be combined to create a new way to understand teachers' experiences. While the quantitative methods described in this section are established (Mokken scale analysis, Rasch analysis and path analysis), they have had little previous use analysing patterns of teachers' work or being used within a feminist critical framework. This set of methods also prompts the discussion of the compatibility of these quantitative analysis methods and the expectations of feminist analysis. The aim of this chapter is to integrate the topic, literature, a feminist epistemology and my position as a researcher through a set of methods.

This chapter begins with a review of the feminist epistemological considerations that framed this work, then how these considerations fit with a critical approach and my own position as a researcher. Presented next is a discussion of mixed-methods scale construction. Then, the methods are described in three stages of scale construction; Stage 1: Construct investigation, Stage 2: Construct development

and piloting and Stage 3: Measurement and contextualisation of the quantitative data. The construct investigation in Stage 1 involved collecting data through interviews and thematic analysis. The constructs were developed in Stage 2 by transforming the themes into items to describe each construct, piloting the items, and analysing the data with Mokken scale analysis (Mokken, 1971). The measurements were obtained in Stage 3 through Rasch analysis then compared using linear and multiple regression analyses and path analysis. Finally, the data was contextualised with teachers' stories from the initial interviews.

Each stage includes a discussion of the data collection or data generation, information about participants for that stage, and limitation of the stage. The results of the first two stages are discussed briefly while the results of the final stage are presented in Chapter 4. The last section of this chapter includes discussion of trustworthiness and ethics considerations for the research.

Epistemological Considerations

When seeking to understand the experiences of teachers from a quantitative, critical feminist position, three elements of epistemology are important: assumptions about the knower, the known and the process of knowing (Sprague, 2016, p. 34).

The knower. The first consideration of feminist epistemology is identifying who can be considered knowledgeable about a topic. Identifying leader, expert, public relations officer or spokesperson as those who are considered knowledgeable excludes people who may know best (Harding, 2004). Jaggar (2004) argues that, contrary to those in power or positions of authority, those who are excluded from power have "a motivation for finding out what is wrong, for criticising accepted interpretations of reality, and for developing new and less distorted ways of understanding the world"

(p. 56). She describes how people in positions of power have an interest in concealing how they dominate and exploit other groups and will be unlikely to challenge the status quo as "they experience the current organisation of society as basically satisfactory and so they accept the interpretation of reality that justifies that system of organisation" (Jaggar, 2004, p. p. 56). Marshall (2005) describes feminist critical policy analysis as including research that "asks first, how does policy or structure exclude certain publics (subordinate nationalities, religions, women, the urban poor, the working class, homosexuals), then asks, what political arrangements support policies and structures that devalue alternative perspectives, that reinforce gender, ethnic/race and class inequities, and asks, who benefits from these arrangements" (p. 2). She calls for researchers to investigate how specific actions "serve some in-group's ideology and purpose" (Marshall, 2005, p.2) and finding how school practices and political agendas benefit certain groups.

In feminist epistemology the term *knower* is often used to indicate that knowledgeable people are not always granted the titles related to authorities or experts. Compared to school administration, corporate office workers or the CEOs of education management organisations, the voices of teachers in marketised contexts are unlikely to be heard unless they are sought out. Seeking out the view of people who are not *authorities* due to power but are knowledgeable because of their position of marginalisation is a key components of feminist epistemology. Code (2014) defines marginalised people as anyone who must *know their place* in a social setting or face censure or exclusion. She describes the gendered patterns of how women's experiences and knowledge are not always recognised (pp. 15-16). Women are overrepresented in any group of teachers and many teachers in international and for-profit schools are from non-Western countries. This means that their experiences are

less likely to be taken seriously may be less visible. Using teachers' experiences to understand the context of marketised schools is an example of critical analysis from the perspective of marginalised groups through "starting epistemic inquiry from the position of the workers' lives" (Code, 2014, p. 13). Listening to teachers' own accounts of their experiences is "epistemologically advantageous. It provides the basis for a view of reality that is more impartial than that of the ruling class and more comprehensive. It is more impartial because it comes closer to representing the interests of society as a whole" (Jaggar, 2004, p. 56). Madhok and Evans (2014) suggest that "if we are to challenge privileged views of the world then we will have to start producing knowledge about the world from the standpoint of those who are marginalized" (p. 4). It is possible that the marginal position of teachers allows a distinct perspective because they view school context from the *edge* and how it sees the *centre*, whereas educational leaders and policymakers may have a restricted view of only the *centre* (hooks, 2000). Harding (2004) explains that by treating teachers as "collective 'subjects' of research rather than only as objects of others' observation, naming, and managements" (p. 3) we are able "to explain kinds of accounts of nature and social relations not otherwise accessible" (p. 3). Calás, Smiricich and Bourne (2009) describe how critical researchers "emphasize that obtaining a more complete picture of a world made up of power relations means analyses must start from the position of nondominant participants and their understanding of themselves in relation to the dominant" (p. 561). Teachers are not the most powerful members of school organisations, are majority female and are often from non-dominant groups. "We try to understand reality from the perspective of the people experiencing it" (Acker, Barry & Esseveld, 1991, p. 146) by treating teachers as the key knowers in schools.

The feminist perspective is not exclusive of men nor solely focused on women. Women will be a significant proportion of any sample of teachers, especially due to the over-representation of women in certain types of jobs. This will be embraced because, as Oakley (2000) points out, gender links biology to "social structure in systematically patterned and unequal ways. Men and women appear to be different because they occupy different social positions and 'enjoy' different life-chances" (p. 50). She argues that in research which attempts to control variables of social position, gender differences may seem to disappear, but that disappearance is often due to the bias embedded within the research not because gender differences don't exist (Oakley, 2000). While the emphasis may be strongly on women, Griffiths (2006) reassures us that "a feminist theory of practice is not a theory just for feminists — or even just for women. Rather, it is universal, equally applicable to men and women" (p. 393). Within schools, teachers, regardless of their gender, are in positions where they must "'know their place' and occupy that place as befits one variously subject to the expectation and limitation that infuse the socio-political imaginary of a given society" (Code, 2014, p. 16). To follow hooks' (2000) call to action, feminist theory should be developed to speak to everyone with the hopes of improving the conditions for all. The inclusion of men serves to create a clearer picture of teachers with the gendered nature of schools, marketisation and teachers' work at the forefront.

The known. The second consideration of feminist epistemology is what can be known. Stanley and Wise (2002) discuss feminist epistemology as based in "women's concrete and diverse practical and everyday experiences" (p. 191). The known is related directly to how teachers interact with the social world. The knowledge that teachers have is connected to their own experience. Those experiences shape and are shaped by the world around them. This shaping can come from many

different directions as "teachers are not disconnected from society but deeply embedded within it; they relate in complex ways with the political ideologies that surround them in schools, communities, our nation, and the world" (Nieto, 2003, p. 8). Teachers can also shape their social environment through their interaction with students, their collaboration with colleagues and their assent or resistance to organisational controls (Ball & Olmedo, 2012). A feminist perspective means viewing how people experience the social world as the most powerful insight into reality as "nothing exists other than social life, our places within it and our understandings of all this" (Stanley & Wise, 2002, p. 193). The strength of this approach is "'connected' as distinct from 'separated' knowing, dissolution of the artificial boundaries between knower and known, the opportunity to ground knowledge in concrete social context and experiences" (Oakley, 2000, p. 47). What can be known about teachers is intimately connected to their experiences, their context and their own understanding. Rather than assuming schools or teachers can be described best through objectivist and outsiders perceptions, feminists aim to demonstrate "a rationality not divided from experience, from oppression, from particularity or specificity; a reason, on the contrary, that includes them [women] is a rationality not beyond or above experience but based upon it" (Gross, 1986, p. 203). Feminists see reality as understood differently by different people without assuming everyone within an organisation shares a single experience of the world (Stanley & Wise, 2002). The focus on the lived experiences of people is intended to deconstruct the illusion of a single, objective reality and acknowledge the variations of experiences and the connection of teachers to their social world. Therefore, teachers' diverse accounts of their experiences of their work seem an ideal means to gain a complex and nuanced understanding of the social reality of the world.

While individual experiences are fascinating, there are several pitfalls of describing the known based on single, individual accounts. It is a difficult balance to acknowledge participants' own understanding of the world while simultaneously recognising their limited ability to see the overall patterns. There is an inherent contradiction in both trusting what teachers have to say about their experiences and acknowledging that no individual can tell the complete story. On the other extreme, there is also potential of analysing individual teachers' experiences as if they were disconnected from larger patterns. Ingersoll (2009) points out that "teachers' individual troubles in the workplace are neither unique nor isolated . . . invisibly but indelibly shaped by the larger societal and organisational contexts in which they lie" (p. 4). When viewing the importance of teachers' connections with the social world, it becomes necessary to look at the overall patterns through quantitative analyses. While this may seem to be an extension of feminist epistemology, authors like Hughes and Cohen (2010) and Williams (2012) discuss how feminist research benefits from quantitative analysis methods because of the strength in understanding larger patterns. Feminist theorists have considered how to develop quantitative processes by adapting them based on feminist processes of knowing, integrating the focus on individual experiences with methods to understand overriding patterns while acknowledging the limits of each approach.

The process of knowing. The third component of feminist epistemology is the process of knowing. The expectations for feminist research are summarised by Gross (1986). She did not take a stance on methods but set guidelines for navigating the process of knowing. First, that researchers must acknowledge their own position and connection with the research rather than presuming that the best researchers are neutral observers, objectively reporting universal statements about subjects they are

detached from. She calls on researchers to identify the power relations built into research methods, being especially sensitive to issues of language, class, and the desire of participants. Second, that researchers must identify the ways in which research participants are positioned in a context. This means looking at context of participants as situational to their time and space and recognising that each participant has a context sexually and politically. Third, that experiences are key to feminist research. She describes the strength of beginning research with the experiences of participants, especially women and other marginalised groups. She warns against privileging any voices over others and recommends taking special care to find the voices of those in marginalised groups. Researchers are implored to recognise that research participants are connected to their own experiences and are motivated by their own interests. This means listening carefully not just to what is said, but to how it is said and what is not said to uncover the lived experience of people. And lastly, integrating those together, that the methods chosen for research consider the range of experiences of participants, rejecting the assumption that precision or formality are the only ways to achieve validity, but instead aiming to find ways to discover the experiences of real people (Gross, 1986, pp. 203-204). Gross' framing of the process of knowing calls on researchers to integrate feminist thinking into their own process of developing methods.

With these guidelines for conducting research, the second part of the process of knowing is considering which knowledge produced by research is considered legitimate. Analysing for-profit international schools and the experiences of teachers within them, this research had to be conducted with attention paid to the audience of the research. Marshall and Young (2006) explain the difficulty of conducting feminist research in policy settings, noting that feminists "must find ways to tune their designs

to their political context, even while they are challenging dominant values in those contexts" (p. 66). In research about education policy, Westmarland (2001) recommends that it is "important for researchers to 'speak the same language' as those to whom the research will be presented" (p. 19). Although qualitative approaches to research in education are becoming more common and accepted, Hughes and Cohen (2010) recognise that "quantification remains the 'gold standard' for much social science and policy-oriented research" (p. 2). Quantitative approaches are often praised for their objectivity and universality, as numeric *proof* is often perceived as objective and true (Oakley, 2000). She makes the connection that the "most valid knowledge becomes that produced, or described, using numbers. The Latin root of 'validity' means 'power' . . . as the power of some people to know more, or better, than others both inheres in and derives from knowledge expressed numerically" (Oakley, 2000, p. 113). The trend of *evidence* being equated to numbers is described by Blackmore (2010) as she states that quantitative evidence is simply "empirical knowledge defined narrowly" (p.4). The supposed objectivity of numbers is assumed to remove the bias of researchers and override difficulties of context. Biesta (2017) points out the "pseudo-security of numbers, stemming from the idea that measurements are objective and can release us from the more difficult task of making judgments" (p. 317). Unfortunately, quantitative research may be used to oversimplify complex issues, and this may have repercussions on the knowledge produced. Marshall (2005) explains the ways that research methods are tied to power relationships when "traditional assumptions about value-free, neutral, objective research and analyses become devices that *guarantee* the dominant ways of thinking will be reinforced by the research and analysis" (pp. 3-4, emphasis in original). She recognises that even though there are power relations and social history embedded in every decision,

policymaking though objective quantification is quick and effective and can claim neutrality. However, this ease and clarity comes at a cost. A clear numeric outcome seems appealing, secure and potentially free of personal interest, but the separation of knowledge and experience may adversely affect the knowledge produced.

Feminist critical scholars engage with quantitative analysis, but with careful consideration of the process of creating knowledge. A piece of research would not be considered feminist if done at the expense of losing the voice of participants (Sprague, 2016). Williams (2012) acknowledges the past divides between feminist scholars and quantitative methods but calls for a re-engagement. She states that "even though feminism has disengaged from numbers, they still hold power in our society and to most, including policymakers, represent objective knowledge. To ensure that the feminist challenge to objectivity endures we must reengage with quantitative research" (Williams, 2012, p. 83). Feminists promote quantitative methods for feminist purposes such as amplifying certain voices or legitimising knowledge of groups that otherwise may be marginalised. Westmarland (2010) compares it to a language barrier, suggesting that, "in attempting to make a government take a feminist issue seriously, it is essential to present research in the (masculine?) language such a research audience expects" (p. 20). Refusing the oversimplification of single outcomes associated with quantitative research means taking Stanley and Wise (2002) seriously in their call that "feminist approach should recognize, indeed begin from, the existence of variations and complexity" (p. 110).This means creating research methods that integrate feminist principles within a framework that views teachers as the knowledgeable figures and quantitative outcomes as the goal while still embracing the personal experience of participants through the complexity of qualitative-style research.

Researcher Position

From the starting point of a feminist epistemological framework, my own position as a researcher becomes necessary to discuss. I will discuss my own perspective and locate myself in the field of quantitative, feminist critical analysis with its implications for the methods chosen for this research. My position as a feminist, my history as a teacher and my quantitative training have given me a specific view of how I see the world. This experience leads me to ask certain questions, seek knowledge from particular sources, and accept specific kinds of answers to the questions I ask. Sprague (2016) notes that quantitative researchers are unlikely to write about their motivations and personal decisions behind their research, instead filling in methods as if the processes do the work instead of the researcher (pp. 25-26). As a feminist critical scholar, I see my own experiences and my beliefs about knowledge to be integral to how I chose the methods for this research and how the methods were carried out, even though quantitative methods are a key component of the investigation. While the results of the research may look like numbers output by a piece of software, every element of the research process has been guided by my position as a researcher.

The overall framing of the research as feminist guides the focus to teachers, to data collection based on teachers' experiences, to analysis methods that allow for variation in experience and for a critical perspective. From a feminist perspective, the choice of methods is described by Sprague (2016), that each method:

> …opens up possibilities and exposes choices. It allows us to ask such questions as: Is the way we gather and interpret data consistent with what we believe about how knowledge is and should be created? What unexamined assumptions assumptions about knowledge underlie our standards for evaluating claims about how things are or what really happened? We can even pose questions rarely considered in relation to methodology, questions about how knowledge fits into the rest of social life: Whose questions are we asking and to whom do we owe an answer? (p. 5)

My history as a teacher and, particularly, my experience working at for-profit schools was the impetus for conducting this research. From my time as a teacher, I know that I had a very different experience from colleagues in the same school and that my experiences varied as I moved between schools, even when I held a similar job. I bring to this research personal experience that is shared with the participants but also remarkably different. As a feminist, I see the gendered nature of the social world and how marginalisation of teachers exists in the school workplace. I also recognise that my questions for this research come from my own experience. As a feminist, I reject the idea that the best judgments come from the purely rational, outsider and ultra-rationalist *disinterested interest*.

My own training in methods intended to quantify perceptions – notably Mokken scale analysis (Mokken, 1971) and Rasch analysis (Rasch, 1960)– has led me to ask questions about the larger patterns of experiences. In my previous use of these methods, I have seen how individual perceptions can uncover larger phenomenon across many participants. While my quantitative training has led me to prefer certain methods, I also integrate this with my feminist position. I aim to avoid the false dichotomy of quantitative research versus qualitative approaches instead, combining qualitative and quantitative data. I see how teachers are connected to their context, the larger patterns of their work, and how their individual experiences can be investigated through quantitative methods. The feminist view influences the methods of data collection and analysis. While I have chosen significant quantitative methods, I take guidance from Rasch theorists that "we need to spend more time investigating our scales than investigating *with* our scales" (Bond & Fox, 2015, p. 5). It is not acceptable to me as a feminist to use outcome measures simply to label participants, but instead, the responses of participants must also inform the quality of the analysis.

This research was not conducted to pragmatically mix different methods to answer different types of questions, nor to avoid the pitfalls of each paradigm. Instead, this mix was chosen because the combination has enormous potential to meet feminist research expectations and qualify as legitimate, feminist quantitative knowledge creation. While feminist and critical research are often deconstructive, breaking down existing assumptions to reveal hidden practices of power, these approaches can also be used for constructing knowledge. Gross (1986) describes how feminists are involved "in a positive project of constructing and developing alternative models, methods, procedures, discourses, etc." (p. 195) to methods that privilege certain people as the most knowledgeable, certain knowledge as the most important and certain ways of knowing or analysing knowledge as the most valid. This chapter describes the methods I have undertaken that I believe fit the expectations set by Gross and other feminist thinkers. The mixing of methods allows for a combination of my feminist commitment to the lived experience of teachers and a quantitative drive toward seeking the larger patterns of teachers' experiences.

Mixed-methods Scale Construction Approach

The design of this research was a mixed-methods scale construction approach. In this section, the potential problems of mixing methods are addressed along with the ways this approach attempts to remedy those problems through a feminist approach to scale construction. While many studies claim to do mixed methods, in practice, most are conducted with some quantitative data collection or analysis and with some qualitative data collection but the two may not actually mix together. Unfortunately, using a mixed-methods approach does not guarantee that the results will be of a higher quality as "using multiple methods does not lead to sounder explanations in

simple additive fashion" (Oakley, 2000, p. 70). Assumptions that different types of data can be used for triangulation often seem overstated when corroboration is only one of many possibilities of multiple data collection (Brannen, 2005). Using mixed methods for the purpose reporting so-called *hard* proof alongside more subjective data in a side-by-side manner seems prone to many methods done inexpertly or incompletely (Sale, Lohfeld, & Brazil, 2002). Researchers claiming that different stages of data collection and analysis are meant to answer different questions from different philosophical, ontological and epistemological paradigms are likely to find irreconcilable issues as the researcher's position is a more important factor for paradigm than methods (Sandelowski, 2000). Hester, Donovan and Fahmy (2010) explain the conflict with feminist theory that "quantitative methods and survey approaches in particular, have tended to be used for policy research, often in ways that are not sensitive to gender or women's experiences and concerns" (p. 63). These issues mean that a mixed-methods approach must be carefully considered and implemented.

Specific beliefs about epistemology may be the true barrier between approaches. Sandelowski (2000) describes how data collection and analysis methods are not automatically linked to specific paradigms but that instead, the position of the researcher informs the techniques chosen and the analytical treatment of the results. She argues that knowing if research is *qualitative* or *quantitative* is not as informative about the position of the researcher as their attitude toward their data and mix of methods. The presentation of quantitative methods does not mean that the researcher is a positivist, qualitative data does not rule it out either, and a mix of methods can be done from a variety of positions. When the mix of data is done poorly, it may be because the position of the researcher is not clear, and the results are treated as

containing their own paradigm rather than justified by a larger theory of working with results. The data type or analysis methods may not be the true dividing issue and different methods can be united. Rasch theorists Fisher and Stenner (2011) argue that "the ontological divide between qualitative and quantitative methods is unnecessary, counterproductive and illusory" (p. 89). Instead, it is possible to do measurement in a way that is "qualitatively meaningful and quantitatively precise" (Fisher & Stenner, 2011, p. 89). Sale, Lohfeld and Brazil (2002) warn that differences in epistemological assumptions behind quantitative and qualitative methods should not be ignored and that doing so threatens the quality of research. They suggest that the difference in methods means that the two types of data are not the same, making triangulation impossible, but that "the distinction between 'lived experience' and 'measure' reconciles the phenomenon to its respective method and paradigm" (p. 50). To reconcile the two, the approach of this research is to use a specific set of methods to gradually transition teachers' experiences into a measurement framework using teacher input throughout the process and relating the measurements back to the lived experiences of participants in a feminist manner.

Methods must always be done with a purpose and mixed methods require a purpose beyond *different methods answer different questions*. Mixed methods can be treated as its own paradigm, not simply as forcing together two disparate fields (Teddlie & Tashakkori, 2009). Mason (2006) suggests mixing methods as part of a single and coherent worldview and a set of questions that are answered through the integration of methods and data. She suggests that, superior to triangulation, the parts of research "be consolidated, or integrated, to produce a fuller or more valid or robust picture" (p. 20). A similar approach is described by Burch and Heinrich's (2015) "fully integrated methods". It is not the methods that create the paradigm but the

reasons behind choosing methods that indicate different beliefs about knowledge, data collection and analysis. Justifying mixed methods through the argument that different questions require different data restricts the presentation of data, obscures the context of data and relies too heavily on corroborating triangulation. Instead, mixed methods can be used with a guiding purpose beyond the research questions or data presentation meeting philosophical aims to create better methods and more evocative findings (Sandelowski, 2000).

The mix of methods in this study was done to bridge the gap between lived experiences and measures. This entails focusing on the knowledge and experiences of teachers, their perception of their work, and how this could be integrated into the research at every stage. To guide the choices of how to understand the experiences of teachers, I chose methods that I felt would be feminist in character alongside quantitative analysis methods necessary to speak the language of policymakers (Westmarland, 2001). Methods were integrated in a way that quantitative measurement instruments were developed based on teachers' stories of their own experiences. Creswell (2013) identifies the strength of mixed methods approaches that researchers may develop "better measurement instruments by first collecting and analysing qualitative data and then administrating the instruments to a sample" (p. 218). The outcomes of the qualitative data analysis framed the quantitative design. Later, the qualitative data was reintegrated at the conclusion to elaborate the quantitative findings. The items of the scale allowed for quantitative data but with accessible qualitative meaning through the items. The translation of stories to items, to scales and back to stories meant that the data was "creatively mixed methods" (Mason, 2006, p. 15). This was done in accordance with Wilson's (2005) "four building blocks of measurement" to identify constructs, create items, devise an

outcome space, and create a measurement model. The specifics of each stage of scale construction give details about the methods integration at each step.

Three-stage Design. The overall aim was to understand teachers' experiences through scale development. The mixed-method scale development approach required several steps and was framed by Wilson's (2005) four building blocks of constructing measures. The three stages and their steps can be seen in Figure 1. The three-stage design began with qualitative interviews. The interviews were conducted with teachers working in the most obviously marketised education contexts, for-profit international schools. The data was analysed through thematic analysis to feed into Stage 2 of the design. Stage 2 of the design was to take teachers' stories, integrate them with existing literature and create construct maps based around the interview themes. The items were created then pre-piloted with "informants" (Wilson, 2005, pp. 19-21) who could advise about the wording and applicability of the items using the Three-step Test Interview (TSTI) process (Hak, van der Veer & Jansen, 2008). The items were then piloted to test the constructs and reduce the number of items for large-scale data collection. The quantitative analysis in Stage 2 was done with Mokken Scale Analysis (Mokken, 1971). The final data collection and analysis of the items was conducted in Stage 3. The final questionnaire was administered to teachers and analysed with Rasch analysis (Rasch, 1960). The results of the Rasch analysis in combination with teachers' stories from Stage 1 are reported in the findings section.

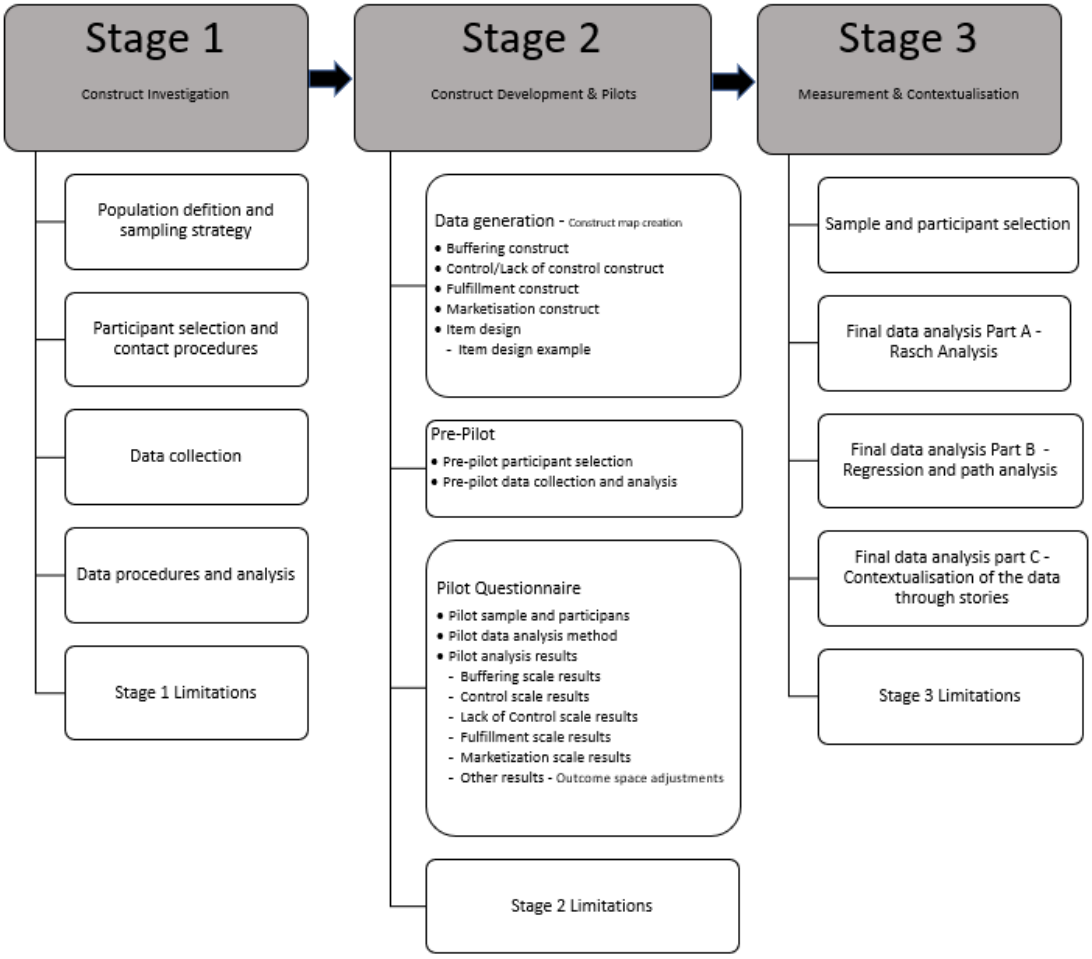


Figure 1. Three-Stage Methods Organisation Graph.

Research Questions

The methods in this chapter are aimed toward understanding the experiences of teachers working in marketised contexts through the process of scale construction. The fundamental research question is: How do teachers experience their work in marketised contexts? While this was the fundamental question, it was broken down into parts based on the constructs that emerged through the methods.

1. What teacher experiences indicate the level of business influences on teachers?
    1a. What are the psychometric properties of this scale?
    1b. What idiosyncrasies of items and respondents were found for this scale?
    1c. What is the pattern of experiences of business influences?

2. What teacher experiences indicate how running a school like an EduBusiness is evident in teachers' work?

2a. What are the psychometric properties of this scale?
2b. What idiosyncrasies of items and respondents were found for this scale?
2c. What is the pattern of experiences of an EduBusiness?

3. What teacher experiences indicate teachers' fulfilment and their buffering from marketisation influences?
3a. What are the psychometric properties of this scale?
3b. What idiosyncrasies of items and respondents were found for this scale?
3c. What is the pattern of experiences of fulfilment and buffering?

4. What teacher experiences indicate lack of control over their work?
4a. What are the psychometric properties of this scale?
4b. What idiosyncrasies of items and respondents were found for this scale?
4c. What is the pattern of experiences of lack of control?

5. What are the relationships between these scales?

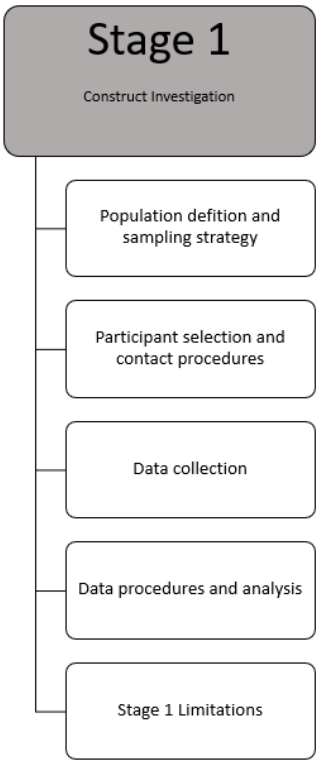


Figure 2. Stage 1 Methods Organisation Graphic.

Methods Stage 1 - Construct Investigation

The first stage of data collection and analysis was to investigate the constructs. The aim of the first stage of data collection was to gather teachers' accounts of their

own experiences in marketised contexts. This was done by collecting data through interviews and by analysing the main themes that were evident across many differences and the range of experiences of teachers. The main themes of the interviews then led to construct development in Stage 2. The steps of Stage 1 can be seen in Figure 2.

Population Definition and Sampling Strategy. For this stage of the research, the population from which the sample was taken was teachers working in large, multi-national, for-profit educational management corporations specialising in international schools for K-12 students. I chose to speak to teachers working in schools run by for-profit education management organisations that marketed themselves as international, hired staff from a variety of backgrounds, and delivered English-language compulsory education (approximately ages 5-18) in day-school (not predominately boarding school) settings. This excluded elite boarding schools, low-fee private schools, for-profit childcare, religious schools or for-profit higher education institutions. While teachers in those sectors may have significant insights into the marketisation of schools, each system had too many confounding factors to be included in this research. The choice to interview teachers working in schools on the extreme edge of private, for-profit school in countries with highly privatised systems was intended to address claims that privatisation is difficult to study in places that do not fully embrace privatisation (Heller-Sahlgren, 2014).

The sampling strategy for interviews was a targeted sample with very special considerations. To aid in the utmost protection for my participants, the sampling strategy had to ensure that the employers did not find out who had spoken to me. Because of the nature of this research, participants may have felt uncomfortable speaking with me due to restrictions put on them by their employer. At least one of the

companies in the investigation explicitly forbids employees from disclosing any information that may adversely affect the business or interests of the company and making any derogatory remarks about the company or any of the employees even after employment. This is discussed further in the Ethical Considerations section at the end of the chapter. While teachers were unlikely to disclose this kind of information, they still may have felt risk in speaking to me. For this reason, and because schools were not the unit of analysis, I did not contact the schools directly. The analysis was also not intended to compare companies nor countries, so I did not randomly sample employees. Rather, I used the kinds of sampling suited for finding "hidden populations" (Watters & Biernacki, 1989). International teachers can be considered a hidden population, not because their work is invisible, but because the ways they are active, controlled, or the ways they subvert control may not be visible. "Such populations are socially invisible or 'hidden' in the sense that their activities are clandestine and therefore concealed from the view of mainstream society and agencies of social control" (Watters & Biernacki, 1989, p. 217). Many teachers in international schools – including teachers in for-profit schools – are not affiliated with a union or other agency and may have little visibility as public actors. International teachers are also likely to be expatriates, meaning they are not citizens in their country of residence and are also not counted in the population of teachers in their home country. Due to these multiple layers of invisibility, international teachers can be considered a hidden population.

To obtain a sample of this hidden population, I used a targeted sampling approach. First, subgroups are identified and then sampling is done within each subgroup (Magnani, Sabin, Saidel & Heckathorn, 2005). The subgroups I identified were the company, the country, and the position of the teacher. The three subgroups

are not independent because each company operates schools in different locations and only one city hosts schools from all three companies. The companies from which to draw the sample were chosen based on Waterson's (2016) analysis of the most influential for-profit education providers in the world. The three countries were chosen because they hosted at least two of the three main international companies (and in one case, a fourth large company). While neither the company nor the country was the unit of analysis, they were identified as subgroups that required consideration so that country idiosyncrasies were possible to recognise in the analysis (e.g. certain student populations, government oversight bodies or regional considerations). The number of schools in each location for each company at the time of the interviews can be seen in Table 1.

Table 1

Distribution of schools per collection site for interviews

City	Company A	Company B	Company C	Company D
East Asian City	1	1	2**	0
Middle East City	31	1	0	8
England	4*	0	1***	0

* technically listed as independent non-profit schools, Company A also sponsors a Multi-Academy Trust
** at the time of interview with one newly acquired school since that time
*** international school with 3 branch campuses in England, also manages 39 other schools in England

The aim was to interview three teachers of different positions from each company in each location with a goal of twenty-one teachers from companies A, B and C. In locations where a company had many schools, one school in that location was targeted for interviews. This was done so that individual school idiosyncrasies would be visible in the analysis of the interview data. I also aimed to have a variety of nationalities with many women and some men within the different positions. Although the sample was not completely representative of all possibilities, the goal was to capture a range of experiences and this targeted sample allowed for variation.

Participant Selection and Participant Contact Procedures. The semi-structured interviews were conducted in South East Asian City, Middle East City, and in England between June 2016 and November 2016 with twenty-two participating teachers. The teachers were interviewed one time each, for between 45 minutes and 90 minutes. Most of the interviews were conducted face-to-face with some via online video chat software. The interviews were done individually, except in two cases where two teachers met with me at the same time. Table 2 shows the interview participants based on company and city with basic demographic information about each participant.

Table 2

Interview participants per company and city.

City	Company A	Company B	Company C	Company D
East Asian City	1 Female teacher	1 Female teacher	1 Female teacher (former teaching assistant) 1 Female lead teacher 4 Female teachers 1 Male teacher 1 Male supply teacher	X
Middle East City	3 Female teachers 2 Male teachers	1 Female teaching assistant 1 Female teacher	X	1 Female teacher
England	1 Female teacher 1 Male teacher	X	1 Female teacher 1 Male teacher	X

Note: An X denotes that no participants were included from that subgroup because the company does not own any schools in that country.

Participants were invited to participate through LinkedIn. LinkedIn is intended for business and job connections, so a connection request can only be sent when you have another connection in common. This ensured that I was not cold calling any participants and that they had initial control over whether I could ask them to participate in research. My own profile stated clearly that I was seeking teachers to participate in research interviews to talk about their experiences and the influences on their work. Many people I contacted on LinkedIn looked at my profile as part of the process. This meant that they first could decide whether to add me as a connection

based on some knowledge of me as a researcher. The teachers who added me as a connection were then contacted through the messaging system on LinkedIn to be invited to participate in an interview. If they were willing to participate, they were guided to an online form where they could leave contact information and their preference for an interview date. When participants responded in the online form that they were willing to participate, I contacted them through their preferred method and set up and interview date and time.

Data Collection. The semi-structured interviews were approached with a feminist, psychosocial interview approach (Hollway & Jefferson, 2000). The interview schedule can be found in Appendix C. The intent of the open-ended questions was to elicit stories that included significant personal narrative from the participants. The purpose of eliciting stories is based on a belief that "people's lives have a biographically unique 'reality' which our open questions were designed to elicit" (Hollway & Jefferson, 2000, p. 35). The participants were asked what experiences they had as teachers, what kind of actions they took, how they felt about what was occurring, how they participated in their work and sometimes they were asked why they took certain actions. It was not assumed that teachers would be able to tell any absolute truths and often participants from the same school told different versions of the same event. The focus was finding different ways that individuals interacted with the social world of the school (Hollway & Jefferson, 2000, pp. 32-33). Because the goal was to identify the range of experiences, the interviews were conducted to obtain a range of perceptions to aid in the construction of items. This approach was chosen to fit with the feminist approach to methods. The method was focused on the social world of teachers and was also sensitive to the power relationship between interviewer and interviewee. It was also open to the possibility

that the researcher may have an emotional reaction to or personal connection with the subject or that at times, the researcher and subject may *co-produce* data. This fits within the feminist approach "with researchers acknowledging they are not above their subjects but actually located in the same social space" (Calás, Smircich & Bourne, 2009, p. 561). The interviews were approached as "an interactive experience, [where] researchers are invited to bring their personal role into the research relationship by answering participants' questions, sharing knowledge and experience, and giving support when asked" (Dwyer & Buckle, 2009, p. 62). The psychosocial approach was used with an attempt to transform the interviewer "from the highly visible asker of our questions to the almost invisible, facilitating catalyst to their stories" (Hollway and Jefferson, 2000, p. 34). While some participants led the interview with their stories, others required prompting to tell their stories.

Data Procedures and Analysis. Procedures were taken with the interview data to ensure that data was recorded in a useful and anonymous manner. During the interviews I took notes and, when allowed by the interview subject and when the technology worked, the interviews were also recorded. Participants were labelled in my notes by their location, their order of participation and company. The locations were labelled ME for Middle East City, SA for South Asia City and UK for England. For example, the seventh participant working for Company B in Southeast Asia was labelled 7-B-SA. Immediately after each interview, I entered my notes into a spreadsheet, separating "codable moments" (Boyatzis, 1998) into separate lines on the spreadsheet. These moments were paraphrased or contained direct quotes from the interview participants. After several interviews, I reviewed the quotes and paraphrases, assigning a single word or phrase to each moment such as *power of parents* or *financialisation*. The codes were partially informed by previous literature

about privatisation and emerged from patterns in the data. As I continued to code, I periodically sorted all the data to ensure that similar moments were coded in the same categories. The codes were merged or separated as the patterns became more apparent. When all the data had been coded and checked, the codes were organised into sub-themes and the sub-themes were connected into main themes. The four main themes that emerged were buffering, control, fulfilment and marketisation. An example of how the thematic analysis was done is in Appendix J. The goal was to seek out a small number of themes that occurred in multiple interviews (Creswell, 2013, p. 195). Thematic analysis was chosen for its strengths in "bridging or translating between the worlds of qualitative and quantitative research" (Boyatzis,1998, p. Vi). The main themes of buffering, control, fulfilment and marketisation are further detailed in the Stage 2 as part of the construct development.

Stage 1 Limitations. There are several notable limits and delimits in Stage 1 of data collection and analysis. The main limits are related to participant selection and self-selection. As interview participants were contacted only using LinkedIn, there was some selection bias built into the process. Only teachers with LinkedIn accounts were potential participants. LinkedIn is promoted as a place for professionals to be self-promoting and networking but may not be known by all teachers. LinkedIn is also commonly used for finding jobs, so teachers who are very active on the website may have other motivations for responding to connection requests than participation in research. The teachers self-selected by volunteering to participate, so they were a non-random sample of the teachers who use LinkedIn.

An unanticipated reaction to the wording of the initial contact of participants may have also influenced participant self-selection. While the wording of the initial invitation to participate was neutral (see Appendix B), the responses to it were often

opinionated. One potential participant declined with an explanation that their city was conservative and that they would not be able to participate because they chose not to be opinionated. They had clearly considered the topic controversial, viewed the research as contrarian and saw their own opinion as a possible problem. At the other extreme, another response was "Great research topic by the way...very exciting!". While there is no way to control for participants' reaction to the initial contact, it is possible that their perceptions of the topic influenced their decision to participate or not. Simply including that I was investigating the influences on teachers in for-profit international schools hit a nerve. Unfortunately, there is no reasonable way to avoid this possible limit on participants.

The selection of participants was non-random and did not exactly replicate the distribution across companies that was originally planned. I had aimed for twenty-one participants with three teachers from each company in every country in the study. While twenty-two participants were interviewed, they were not precisely distributed between companies, countries or schools. While it is possible that these elements of selection could change the make-up of who participated in the interviews, the range of experiences of the teachers and the diversity of the participants seemed to indicate that there was no significant problem with the selection method. The purpose was not to generalise about any company, country or position, so the non-random sample seems sufficient to meet the objectives of Stage 1. The range of companies allowed for more variation in the range of experiences and was not a strict frame but rather a goal to protect from hearing repetitive stories about the same company. Unfortunately, I was not able to interview as many teaching assistants or other types of teachers as I had hoped. Teaching assistants were very difficult to find, only one current and one former teaching assistant volunteered to participate, and I found no male teaching

assistants from any of the schools on LinkedIn. The participant selection procedures allowed for a great range of experiences to be heard but would not have been appropriate for a stand-alone study because of these significant limitations.

I also placed some delimits on the research. The participants spoke about the national context of their schools and this was discussed in the interviews, but any specifics about the countries were omitted to maintain the anonymity of participants. I decided early in the research that the study was not the context of each country but the patterns across contexts. Similarly, government regulation of the private sector was significant in each data collection location. If teachers told stories about regulatory bodies, I asked about implementation at the schools and how this affected their work, but I did not specifically ask about government regulation. As one of the interesting themes was buffering, it would have been interesting to see the patterns of buffering against these regulatory bodies. Unfortunately, because I did not press teachers to talk about regulation, was not retained in Stage 2.

Methods Stage 2 - Construct Development and Pilots

The second stage of the methods was construct development and piloting. The objectives of the second stage of data generation, collection and analysis were to create the construct maps based on the interview themes and to create the first iteration of the questionnaire items. This stage also included two tests of the the quality of the items, a pre-pilot to find problems with item wording, especially for second-language speakers, and a formal quantitative pilot. This was done as the initial steps of working toward the creation of a measurement model for Stage 3. The details of the steps for Stage 2 can be seen in Figure 3.

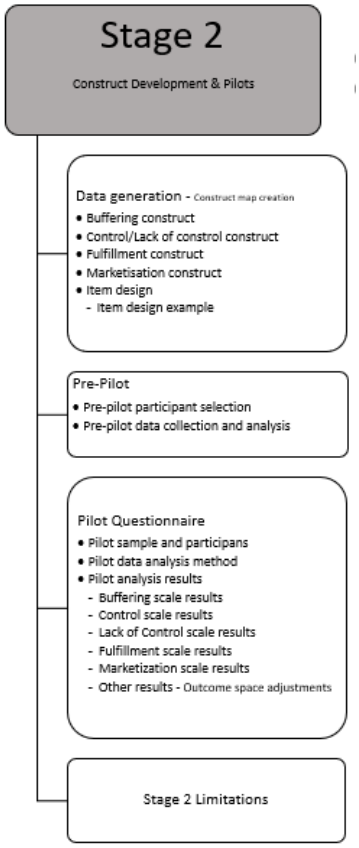


Figure 3. Stage 2 Methods Organisation Graphic.

Data Generation - Construct Maps. The process of developing measurement models was framed by Wilson's (2005) standards of the "four building blocks" of constructing measures. The blocks are the construct map, items design, the outcome space and the measurement model. These four building blocks are used to describe the construction of the scales, the item design process and the pilot analysis.

The first building block of creating a measurement model is creating the construct map (Wilson, 2005). A construct is a theoretical model that describes a single dimension that cannot be measured directly. The construct map is intended to organise the definition of a construct as a continuum of how respondents can demonstrate increasing amounts of the underlying trait. The initial development is not intended to be the technical representation of the construct, but to describe the idea

underlying the construct (Wilson, 2005). For the process of creating a construct map "the discussion starts with a researcher's intuitive idea of what it is that is to be measured, and sets up requirements for a measurement model on that basis" (Wilson, 2004, p. 124). With this approach, the items themselves are not considered phenomenon on their own, but indicators of the larger construct. The items are written to cover a range of difficulties for each construct (E. Smith, 2004, p. 107). For this research, each construct was hypothesised based on a combination of the interview themes, existing scales and previous literature as part of the overall process of mixed-method instrument development design (Creswell, Fetters, Ivankova, 2004). The gradual refinement of each construct can be seen in the complete item design history in Appendix K. The following sections describe how each construct was created around the themes of buffering, control, fulfilment and marketisation. Each section includes a general definition of the construct, some examples from the interview findings, and a discussion of the existing literature or existing scales related to the construct.

Buffering construct. The term buffering is broadly defined as anything that prevents incompatible people or ideas from coming into contact with each other. In this research, the incompatibility could be considered the elements of marketisation that seem at odds with teachers' own beliefs about their work. Buffering can occur through adjusting school structures around new policies, negotiating compromises with school management about the implementation of policy, shielding teachers from policies or encouraging teacher participation to shape policies (Wenner & Settlage, 2015, p. 503).

Buffering was an important theme in the interviews. The interview participants identified many influences on their work that felt unique in their for-profit school

experiences and had indications of incompatibility with their own beliefs. Parents, corporate headquarters and administrators were listed as exerting influence over teachers' work in unwelcome ways. This influence was often described as affecting teachers' work in ways that were incompatible with the teachers' own feelings about their work. Participants also gave examples of how they were buffered from incompatibilities. The participants identified how administrators shielded teachers from the direct influence of parents (for example, stepping in when parents demanded certain outcomes for students by claiming they paid teachers' salaries) or from the company (for example, one teacher leader described how teachers were generally kept from seeing the influence of money on everyday operations). Teachers working in for-profit schools discussed other limitations on their work like curriculum, student body and politics in their countries. However, the teachers seemed to consider negotiating those interactions as part of the job and did not generally discuss buffering from those influences. In essence, buffering only existed for the parts of teachers' work that the participants felt were outside of their actual duties or contrary to their philosophical approach to their work. The interviews led to the description of the construct and existing literature was included to support it.

Researchers demonstrate that buffering keeps schools from being directed by influences outside of the individual school (Bidwell & Dreeben, 2013). Rosenholtz and Simpson (1990) describe buffering as the way to ensure that teachers can focus on their core task of teaching. They state that a failure to maintain the boundary of what is teachers' actual work "or the extent that the school itself creates extraneous management burdens" (p. 245) is a barrier to teachers experiencing satisfaction. The consequences of weak buffering are "a school's vulnerability to the interests of the persons and groups that are active in its environment, including the persons and

groups in the administrative echelons of school systems" (Bidwell & Dreeben, 2013, p. 24). While there is also significant research about how leaders can act as buffers for their teachers (e.g., Wenner & Settlage, 2015) for this research, the construct was developed around how buffering is experienced by the teacher, not the efforts of leaders to enact buffering.

Significant previous literature analyses the connection between outsides forces on schools and students' achievement. Institutional integrity, defined as the ability of administration to keep teachers shielded from outside influences, and teacher morale were found to have the greatest impact on teacher efficacy beliefs and, in turn, on students' achievement (Hoy & Woodfolk, 1993). DiPaola and Tschannen and Moran (2005) have investigated buffering and bridging activities by school administrators and found that buffering may be necessary to keep schools focused on the core aspects of teaching, but that building bridges with parents was most effective in increasing students' achievement. Chubb and Moe (1993) have found that schools free from external influences reported better results. They advocate for a marketised model intended to reduce bureaucracy and outside influence while increasing parental choice. They discuss how a marketplace for schools would buffer schools from influences that would degrade the quality of education. Influence from government regulation, national curriculum models, political parties, and labour unions are what Chubb and Moe (1993) predict marketisation solves. Interestingly, the fundamental nature of for-profit schools is also predicted to increase external influences by creating levels of governance beyond school or local education leadership (for an example in English Multi-Academy Trusts, see Ehren & Godfrey, 2017), recasting parents as customers (Carlbaum, 2016) and overburdening teachers with the principles of business (Grummell, Devine & Lynch, 2009). The influence of business

may be as profound or even more intrusive than the external influences that marketised schools are supposed to avoid. Again, this entire debate is too broad to be fully investigated in this study, so the focus was delimited to teachers' experiences of buffering. The varying examples of how teachers experienced buffering from business-like influences, parents and policies from the interview data were used along with existing literature to create the buffering construct.

Control and lack of control constructs. Teachers' feelings of control and lack of control over their work were included in this construct. Ingersoll (2009) describes the ways teachers are directly and indirectly controlled in their work, how controls can be formal structures or informal organisational culture, and the prevalence of accountability and management in controlling teachers' work. Because *control* is not always the opposite of *lack of control*, both constructs were developed to be tested in the pilots.

The control and lack of control by teachers was one of the main themes of the interviews. Teachers working in for-profit schools spoke about direct and indirect controls over their work as well as ways they had control, their struggles with control, and how their work was controlled. Many teachers expressed satisfaction with the increased amount of control they had over their work compared to previous jobs and noted it especially through lesson planning, curriculum development or classroom activities. Teachers expressed difficulties managing the decision-making processes at their schools, especially related to who controlled how money was spent and how much teacher input was included in major decisions. They described ways their work was controlled directly through mandated changes and indirectly controlled through increases in paperwork, tracking and evidence requirements that intensified their work. There was significant discussion about how teachers were controlled through

their contracts, changes of benefits and work conditions. Participants noted that this felt especially acute because they were international school teachers, experiencing the strain of being outside of their home countries and cut off from familiar processes for health care, union representation and professional support.

Significant literature discusses the control and loss of control teachers feel in their work. Reid (2003) describes the ways that teachers cede control over their work through "the loss by the ordinary worker of the right to design and plan work, the fragmentation of work into meaningless segments, the re-distribution of tasks among unskilled and semi-skilled labour, associated with labour cheapening, and the transformation of work organisation from the craft system to modern, Taylorised forms of control" (p. 561). The control over work is broken down into seven types of control by Standing (1989) as:

- Control over self – The ability of the worker to control their own labour and choice of work activities
- Control over labour time – The number of hours worked, what qualifies as work time, and whether the worker is only paid only for hours "on the clock"
- Control over means of production – The extent to which the worker has control over land, tools, or the spaces that they work in
- Control over raw materials – How the worker controls the process of inputs into outputs
- Control over output – Does the worker "sell their own wares" or is it done outside of their control.
- Control over proceeds of output – Does the worker control the income derived from work by sharing in profit or is their work divorced from gains made by it
- Control over labour reproduction – The extent to which the worker has access to further training and education, skill development (p. 205)

These definitions related to labour process theory may seem more pertinent to factory-type jobs but have been extended by further analysis, particularly with a focus on the gendered nature of control. Peterson (1996) describes the dwindling control that male workers have experienced through globalisation and how this trend mirrors

how women's work has historically been devalued. Workers' lack of organising capability, the atomisation of their work, necessity of flexibility of location, and individual economic insecurity are related to corporate capitalist accumulation of globalised transnational companies (p. 11). Other indicators of having control over work are described by Connell and Wood (2005). They describe the gendered nature of how managers gain control over their work by mastering a specific field to become irreplaceable, spending a lot of time directing other workers, being managed by powerful members of the organisation, and engaging in publicly visible work. These were all indicators that a worker had significant control over their own work. The hidden nature of control is noted by Ingersoll (2009) who finds that "among the most effective mechanisms by which employees are controlled are those embedded in the day-to-day organization of the work itself, and, hence, invisible to insiders and outsiders alike" (p. 138). This means that control cannot simply be understood through direct observation. These varying definitions, in conjunction with the interview data, were used to create the control and lack of control constructs.

Fulfilment construct. Fulfilment proved to be a highly complex construct. Personal and professional fulfilment have been researched and redefined by philosophers, psychologists and sociologists in a wide variety of ways. For this research, the integration of the interview findings and existing scales were brought together in a pragmatic way to understand how teachers spoke about fulfilment in their work.

Teacher fulfilment was a significant theme in the interviews. When teachers were asked about their work, they often spoke of their favourite parts of work; the success of children, their own competence as teachers, how socially and personally suitable the work was for them, and feelings that their work was recognised by

parents or colleagues. They also reported the opposite, such as the times they did not fit with their work, when they were in situations that made them re-think their competence, or when they felt socially excluded at work.

Researchers have focused on the fulfilment of workers and teachers specifically. There are several existing scales developed to investigate the factors of work-related fulfilment. Deci and Ryan (2011) describe the autonomy, competence and relatedness that people feel in social situations. They focus on the context and find that "by knowing that individuals must experience satisfaction of the basic psychological needs to prosper psychologically and perform effectively, people will be able to create social contexts—at home, at school, at work, at the health clinic—that will support flourishing for people who are in those contexts" (Deci & Ryan, 2011, p. 19). Blasé and Blasé (1997) focus specifically on teachers' sense of empowerment including how teachers feel about themselves, their classroom and their school-wide experiences. This includes elements such as satisfaction, security, inclusion, sense of team, commitment, expression, autonomy and professional growth (Blasé & Blasé, 1997, p. 145). Several studies have adapted these ideas to fit workplaces and teachers including Vermeulen, Castelijns, Kools and Koseter's (2012) analysis of student teachers' basic needs fulfilment; Rosenholtz and Simpson's (1990) measures of teacher autonomy; Korthagen and Evelein's (2016) student teachers' basic needs fulfilment link to observable teaching behavior; Gokce's (2010) scale of how teachers' basic needs are met; Fantuzzo, Parlman, Sproul Minney, Perry and Li's (2012) scale of school support for early childhood teachers; Ho and Au's (2006) measures of teacher job satisfaction; Sivaramakrishnan, Zhang, Delbaere and Bruning's (2008) scales of organisational commitment and market orientation; and Van den Broeck, Vansteenkiste, De Witte, Soenens, and Lens (2010) work-related

basic needs satisfaction scale. The items for the fulfilment scale were also informed by Liu, Ding, Berkowitz and Bier's (2014) assessments of school climate based on the enjoyment of teaching, colleague collegiality and principal supportiveness as well as by the OECD TALIS survey items (OECD Publishing, 2014c) like "This school proves staff with opportunities to actively participate in school decision", "This school has a culture of shared responsibility for school issues" and "There is a collaborative school culture which is characterised by mutual support." These existing scales, in conjunction with the interview data, were used to create the control and lack of control constructs.

Marketisation construct. The marketisation of schools is when education institutions take on "behaviours typical of corporations operating in an economic market" (Marginson, 1999, p. 229). The term is used to describe more than the type of schools or its funding, but the ways that market-like behaviours may "change how teachers are prepared; the nature of and access to ongoing professional development; the terms and conditions of teachers' contracts and pay; the nature of teachers' day-to-day activities and the way they experience their working lives" (Ball & Youdell, 2008, p. 14). The literature about marketisation describes how subjecting education institutions to market expectations is common as "markets are understood to be a better way of organizing economic activity because they are associated with competition, economic efficiency and choice" (Larner, 2000, p. 5). Lazzarato (2009) describes the ways inequality, division and competition come together with subjecting any public service to a market. Analysed by Ball (2013) the marketisation of a social service was found to lead to individualisation, inequality, insecurity, depoliticisation, and financialisation (pp. 132-135).

The most prevalent theme of the interviews with teachers in for-profit schools was the marketisation of their work and the influence on their work from teaching in a marketised school. Lazzarato's themes were particularly evident as teachers described feeling individualised in their workplace, noted inequalities between workers, felt insecurity in their working conditions and pay, described how central tenets of education had been depoliticised, and described how the companies had financialised aspects of their work. Some participants saw the direct line of finance and the impact on their work, while others noticed the repercussions of consumerism on the way the teachers were treated in the school. These varying definitions, in conjunction with the interview data were used to create the marketisation construct.

Item design. The four constructs of buffering, control, fulfilment and marketisation were used to develop items. Starting from each construct, items were designed by integrating the overall findings of the interviews and existing literature. Items from previous scales were analysed for how well they fit with the constructs, previous literature was used to fill in the gaps and experiences from the interviews were generalised to be applicable within the construct. The items were created to describe experiences that were similar across different companies and countries, especially when they were experienced at different levels of intensity. Teachers' statements did not directly translate to items because the aim was not to find the most common experience, but the entire range of experiences to create a measurement model. In mixed-methods research, data conversion (Teddlie and Tashakkori, 2009) is often the standard, for example, quantifying an experience of one participant and then counting how many people had a similar experience. This approach was not considered suitable for this research. Creating themes that would relate to items useful for a measurement model was a more complex process than simply quantifying a

qualitative experience. Creating measurement models is based on the idea that "it is not good enough to allocate numbers to human behaviors and then merely to assert that this is measurement in the social sciences" (Bond & Fox, 2015, p. 3). Instead, when creating a measurement model, many different items are created to model increasing amounts of a latent variable. The different experiences that fit into an overall interview theme demonstrated the many different facets of the theme and how they fit together. The items were then created to portray varying intensities of experience.

Several criteria were used to create an item. Each item had to be reportable by a teacher and related to the school context at the *meso* level of teachers' experiences (Ely and Padavic, 2007). This ensured that the items investigated were neither too far out of a teacher's domain nor too specific to the individual. To be reportable by the teacher, the items had to relate directly to what would be experienced by an individual teacher. Items asking for the implications of teachers' actions for students, school development, what happens to other teachers, or comparing promotions and salaries like in the OECD TALIS teacher questionnaire (OECD Publishing, 2014c) were considered unlikely to obtain reliable results. The items were written to be related to the meso level of the school context rather than about overall school policies or individual actions. Teachers' own experiences of policies, the context of the school and their situations in the school were the focus. This meant leaving out items judging the effectiveness of policies or items related to personal self-efficacy unless they were tied to teachers' work.

These choices for item design enabled participants to interact with the items. Marci Enos (2001) describes the process of creating a questionnaire for a measurement model, suggesting that it is like a conversation with the participant. She

explains that researchers participate by creating "Rating Scales so that respondents can answer our questions and, therefore, tell us their ideas about our items in a systematic way" (Enos, M., 2001, p.10). The interaction between participant and researcher occurs through "choosing design elements that promote a conversation they hope will elicit useful subject attitudes, and [writing] items they rely on to assess the range and depth of their subjects' experiences in the area of the topic" (Enos, M.M., 2001, p. 62). As a set of items for each construct, the items needed to adequately represent many different levels of each construct based on the main interview themes. The full evolution of the items can be seen in Appendix K. The items were created to align with each construct, to demonstrate varying levels of the construct and to fit with teachers' experiences as analysed from the interviews. Examples of item design are included in the next section.

Item design examples. A few examples of statements made by participants and how they were shaped into items are below.

Buffering example. From the buffering construct, items were created to demonstrate a range of ways that teachers would experience buffering based on scenarios from the interviews. Participant 19-A-UK said, "the parents come in and go 'I pay your wages'" but she also described how the school administration did not allow that direct influence describing that "parents push and we push back". Participant 1-C1-SA described how a parent complaint was handled with administration supporting the teacher's decision rather than the parent's request. Participant 4-C1-SA described the pressure she could see that school administration was under from parents. She described that the pressure was handled by school administration so that it did affect teachers. These stories led to the creation of the item "School administration DOES NOT submit to parent pressure".

Control example. From the control construct, items were created to demonstrate a range of how teachers felt control over their work. In the interviews, control was discussed through a teacher setting the class timetable (22-A-ME), the ways she had control over process (15-B-ME), designing instruction according to her preferred teaching style (3-C1-SA) and how she felt she had creative control to be innovative in her work (5-C2-SA). These stories led to the creation of the item "I have control over my daily work".

Fulfilment example. From the fulfilment construct, items were created to demonstrate ways that teachers experienced autonomy, competency and relatedness in their work. Participant 11-D-ME described the importance of feeling valued as a teacher. She told a story of changing to a school that helped her meet her professional goals stating that "it made you feel valued, which was a very big difference". Participant 12-A-ME said that teachers feel invested in the school when they feel cared about and described how the opposite was true as well. Participant 2-C2-SA described how teachers feel invalidated as professionals when their work is not valued. These stories led to the creation of the item "Other people demonstrate to me that my work is valued".

Marketisation example. From the marketisation construct, items were created to demonstrate the ways teachers experienced many of the facets of marketisations. The financialisation of the school was described by many participants. Participant 22-A-ME stated outright that, no matter the educational goals, "at the end of the day, the school is there to make a profit". Participant 15-B-ME described her disappointment that the teachers were brought together to listen to the CEO speak about profitability, the company's capital investments and the financial gains that year without any relation to education practices. Participant 4-C1-SA stated that her school

administrators were trained in education but that ultimately "they [the administrators] are judged on the profitability of that school". Participant 12-A-ME2, who acted as a consultant to the leadership team, explained that all decisions were compared to percent of profit or other revenue possibilities. Participant 16-A-SA said outright that she felt that, in her school "everything is for the money". These stories led to the item "My school's finances are often the most important factor for decision-making".

Another example for the marketisation scale was based on enrolment. Participant 5-C2-SA described how she observed the school enrolling students with little or no screening to meet goals of increasing student numbers. Participant 22-A-ME explained a similar situation saying that the school's placement tests did not seem to be a barrier to entry as the school seemed to be trying to enrol as many students as possible. Participant 16-A-SA said that her school was "kind of the last resort for parents" of special education students who had been turned away from other schools. She felt this was possible because the school's enrolment was quite open as the school was trying to increase numbers. She also noted that many of the students seemed to leave mid-year when their waiting list spots opened at other schools. These stories led to the item "My school enrols as many students as possible". With a full set of items for each construct, the next step was to refine the quality of items through a pre-pilot.

Pre-Pilot. The items were initially tested through a Three-Step Test Interview "think aloud protocol" (Hak, van der Veer & Jansen, 2008) as a pre-pilot before quantitative data was collected. The goal of the pre-pilot was to find problems with item wording and comprehensibility as well as to ensure that the items seemed applicable to teachers working in international schools in marketised contexts.

Pre-pilot participant selection. Participants were contacted who were international teachers or former international teachers with a focus on teachers who

had received specialised training in language acquisition and usage. The participants were initially contacted on my behalf by the Sheikh Saud bin Saqr Al Qasimi Foundation for Policy Research. The Foundation has connections to a diverse community of English language educators from many different linguistic backgrounds with an interest in aiding education research. Of the potential participants who volunteered, participants were chosen to reflect very diverse backgrounds with specialised understanding in language. Five second-language English speakers with English as an Additional Language experience and one Native English-speaking teacher participated in the think-aloud protocols. These participants were:

- Native Swahili speaker, classroom teacher with EAL training
- Native Arabic Speaker, EAL teacher
- Native Arabic Speaker, classroom teacher at bilingual school
- Native Hindi Speaker, EAL teacher
- Native Dutch speaker, linguist and EAL teacher trainer
- Native English Speaker with significant experience working with EAL students

The participants met me at the Al Qasimi Foundation office, or I met them at their schools. The process took between 45 minutes and 2 hours for each participant.

Pre-pilot data collection and analysis. The three steps of the Three-Step Test-Interview (TSTI) process were to have participants read through the first draft of the questionnaire items while thinking aloud, semi-structured interviews to remedy any gaps, and semi-structured interviews to understand the experience of the participant after they had completed the questionnaire. The process of TSTI allowed me to analyse how participants read the items, interpreted them and responded to them. The script that was read to participants to inform them about the process can be found in Appendix H. Participants were encouraged to think aloud so that it was possible to identify discrepancies between the intent of items and participants' understanding of the items. Asking participants to discuss the items helps to "determine exactly what

participants see and, therefore, respond to in each item" (Sandelowski, 2000, p. 252). When participants stumbled over words or recorded judgments different from their reasoning aloud, they were asked to clarify why they chose what they did. This was intended to uncover any discrepancy between what the item asked and the judgment of the participant. At times the participants asked me for help in understanding the question. I would then prompt them for their initial reaction or understanding to attempt to identify what had confused them. While the participant read through the items and response categories, common questionnaire answering behaviours were noted on the worksheet, an example of which can be found in Appendix I. I made a note to consider a change if the participants struggled with wording by pausing or asking me what a word or phrase meant. I marked an item for possible revision if participants had trouble answering because they were struggling to remember if something had occurred or had difficulty judging an item on the response categories. I also made a note if participants misunderstood the intent of the item or used the response categories in a way that did not fit the original purpose of the item. Skipped items were marked to see if the formatting needed revision. I used a worksheet like the example in Appendix I to mark any issues and wrote notes to myself about what to fix in the items. At the conclusion of the questionnaire, participants were asked about their general experience filling out the questionnaire. Based on the responses recorded in the worksheet, I reviewed all of the items before the next pre-pilot participant attempted the questionnaire.

Over the course of the six pre-pilots, significant changes were made each time in the wording of items. Many items were simplified or reworded, and several items were removed if they were unclear, were not answerable with the response categories, or did not seem to fit the overall nature of the questionnaire. For example, the item "a

team spirit pervades all ranks in this company" was based on an item from Sivaramakrishnan et al (2008) but the wording confused some of the participants and was simplified to "there is a team spirit through all ranks in the school". The response category labels were modified several times improve the match with the items. All the changes from the initial conception of each item to the result after the think-aloud pre-pilot can be seen in Appendix K.

Pilot questionnaire. The goals of the pilot questionnaire were to investigate which items fit the constructs best and to reduce the overall number of items so that the final data collection could be accomplished in a single questionnaire including all four constructs.

Pilot sample and participants. The pilot questionnaire was split into two separate pilots with different participants. The 59 marketisation and buffering items were included in the first pilot and the 96 control and fulfilment items were included in a second pilot. The Marketisation and Buffering Pilot was conducted with the assistance of the Sheikh Saud bin Saqr al Qasimi Foundation for Policy Research in Ras al Khaimah, United Arab Emirates (UAE). The intended participants were teachers working in schools across the UAE. The pilot then served the dual purpose of refining the items for the final questionnaire and giving some insight about the marketisation of schools in the UAE. The Marketisation and Buffering Pilot was distributed through the Al Qasimi Foundation's social media accounts and mailing lists and administered using Online Surveys (Jisc, 2018). The pilot gathered 52 responses. The demographics of respondents can be seen in Table 3. The Fulfilment and Control Pilot was aimed toward any teachers currently working in a school. It was distributed through LinkedIn, Twitter and Facebook to elicit

responses from teachers around the world and was administered using Online Surveys (Jisc, 2018). The pilot gathered 158 responses whose demographics can also be seen in Table 3.

Table 3

Pilot respondent demographics

	Marketisation and Buffering Pilot (N=52)	Fulfilment and Control Pilot (N=158)
Gender		
Male	12 (23%)	30 (19%)
Female	39 (75%)	126 (78%)
Transgender or Gender non-conforming	1 (2%)	2 (1%)
Position at the School		
Full-time teacher	38 (73%)	99 (63%)
Part-time or job share teacher	1 (2%)	9 (6%)
Teaching assistant	2 (4%)	11 (7%)
Lead teacher or Head of department	8 (15%)	20 (13%)
Other	3 (6%)	19 (11%)
Years working in a school		
Less than 5	11 (21%)	27 (17%)
5-15	25 (48%)	72 (45%)
More than 15	14 (27%)	50 (32%)
Did not say	2 (4%)	9 (6%)
School size		
Fewer than 500 students	4 (8%)	55 (35%)
500-999 students	14 (27%)	65 (42%)
1000-1999 students	18 (35%)	22 (14%)
2000+ students	16 (31%)	16 (10%)
Type of School		
Government (State, public, etc)	11 (21%)	84 (53%)
Private	39 (75%)	74 (47%)
Did not answer	2 (4%)	
Country/Region of Employment		
UAE	52 (100%)	10 (6%)
Other Middle East		17 (11%)
North America		53 (34%)
South America		0 (0%)
Africa		8 (5%)
Asia		16 (10%)
Australia and Oceania		12 (7%)
Europe		42 (27%)

Pilot data analysis method. For the pilot, the data was analysed through the non-parametric analysis of Mokken scale analysis (Mokken, 1971; Sijstma & van der Ark, 2017) using the software MSP5 (Molennar & Sijtsma, 2000). In the pilot, Mokken Scale Analysis was used as an exploratory analysis because it is useful for when "the researcher has assembled the item set based on theory about the attribute of interest and is not yet sure whether all items have sufficient psychometric quality for selection in the final scales" (Sijstma & van der Ark, 2017, p. 144). Non-parametric analysis is best suited for assessment of the dimensionality of the underlying latent variable, especially in smaller samples or exploratory research. Mokken scale analysis is well-suited to test a theory of scale construction because of its minimal assumptions and less stringent model (van der Heijden, van Buuren, Fekkes, Radder & Varrips, 2003). The automated item selection procedure demonstrates items that are related or sub-scales that occur within a set of theorised items (Junker & Sijstma, 2001). The items are analysed so that each item and the collection of items are described by the coefficient Loevinger's H. The calculation is based on a probabilistic Guttman-style analysis extended to be useful for polytomous items. Loevinger's H describes the extent to which the Guttman pattern holds true for an item or set of items. This informs how well each item forms a scale with the other items and the *scalability* of a set of items.

Mokken scale analysis is an iterative process where the scale is built from the data. The data are tested to see if they fit a model with three main assumptions; unidimensionality of the scale, monotonicity, and local independence of the items. When a scale is unidimensional, it means that all the items demonstrably measure a single latent variable. Mathematically, it means that only one latent variable is needed to account for the relationship between the items. Each item is assessed for its

monotonicity, that is, that the items are non-decreasing over the latent variable. If the item is part of the scale and is measuring the same dimension as the other items, then participants demonstrating more of the latent variable will be more likely to endorse items at the higher level of the latent variable. When an item has significant errors in monotonicity, it means that the item may be be poor at discriminating different levels of the latent variable or that the response categories do not reflect increasing amounts of the latent variable. It may also indicate that more than one dimension is present in the set of items. Local independence of each item means that the variation in correlation is due to differences in the amount of the latent variable and not because the items are related at given levels of the latent variable (Sijstma & van der Ark, 2017). When items are not locally independent, different items that elicit overly similar responses across participants will be flagged. This ensures that a scale is not simply made up of many items that measure one part of a scale repeatedly, but instead, that a set of items can be used to measure a range of a latent variable through several items.

In the pilot analysis, Mokken scale analysis was used to investigate the scalability of the items, the unidimensionality of the scale, the local independence of items and to reduce the number of items for the final data collection. Scalability was determined by Loevinger's H. Items with an H coefficient less than 0.3 were considered *unscalable* meaning they were "low quality in the context of the item set" (Sijstma & van der Ark, 2017). While those items may have merit when combined with other items, they were not considered to fit with the set of items under investigation. In some scales, the H coefficient of 0.35 was used as the threshold to reduce the number of items. The reliability of the scale is reported with the Rho statistic. Scales were only considered to have acceptable reliability with a Rho

statistic >0.70 and were preferred to have reliability with Rho > 0.80 (Meijer, 1994). Because this was used as the first step in a larger analysis, items with minor monotone homogeneity violations were retained if they met the threshold for the H coefficient.

Pilot analysis results. The results of the pilots were two moderate scales, two strong scales and indication that significant development was needed for the control and lack of control constructs. Unexpectedly, the marketisation items split into two different constructs resulting in four scales and a construct that required further development. A summary of the results of the pilot analysis can be seen in Table 4. Specific details of the results of each construct are also detailed.

The Control scale and Lack of Control Scales both performed very poorly in Mokken scale analysis which is described further in the next section.

Table 4

Pilot Mokken Scale Analysis results

Scale	Initial #	Result #	Scale H	Rho value	Lowest item H
Buffering	12	9	0.44	0.94	0.36
Marketisation 1 (Business Influences)	47	27	0.50	0.95	0.42
Marketisation 2 (EduBusiness)	47	7	0.55	0.87	0.42
Fulfilment	31	21	0.54	0.95	0.44

Buffering scale results. In the pilot of the Buffering items, Mokken Scale analysis automated item selection procedure was run with 12 hypothesised items and 52 valid responses. Of the 12 items tested, 10 were retained in the automated item selection procedure. The items excluded were:

B9 Administrators encourage dissenting voices
B10 The financial goals of the school ARE NOT shared with teachers

The 10-item scale had a Loevinger's H=0.43, meaning the items were moderately scalable (Sijtsma & Van der Ark, 2017). The lowest performing item was

"B4 Teachers DO NOT need to have a business mind to thrive at this school". It was excluded due to its potential for misunderstanding or confusion. The resulting scale of nine items had a Loevinger's H=0.44, Rho=0.94.

Some other minor adjustments were made to the items to clarify them, which can be seen in Appendix K. Another item was added to address the the buffering of teachers from parental pressure, which was a prominent theme in the interviews but had been left out. "School administration shields teachers from being pressured by parents" was added for the large-scale data collection.

Control scale results. In the pilot of the Control items, Mokken Scale Analysis automated item selection procedure was run with 35 hypothesised items and 158 valid responses. The items that were retained and removed can be seen in Appendix K. Items were retained if they conceptually fit the previous literature. However, as none of the items were included in the final results the full results of the pilot are unnecessary to include here.

Lack of Control scale results. The Lack of Control Scale had poor results in the pilot. Most of the items did not scale with any other items and twelve other items made several short, coarse scales but seemed to need considerable revision. The items that did not scale and were removed were:

F1	I do "hands-on" work
F2	My work is behind-the-scenes
F3	My work is managed by several people
F4	My work could be described as "child care"
F7	I work on a short-term contract
F8	I have an individually negotiated pay
F9	Many other workers do a similar job to mine
F11	I have limited control over my daily work
F12	I share a workspace with other workers
F13	My wage stays mostly the same from year to year
F14	My employer is unlikely to pay for me to develop my skills
F17	I have don't have access to paid leave (for example, sick leave days, professional development, personal leave, maternity/paternity leave)
F21	Other similarly experienced people could be promoted above me

F25 My immediate supervisor has little power in the school
F26 I stay out of the politics of the school
F27 I would have to stay in my job even if I wanted to leave
F28 What happens in other parts of the school is not my concern
F29 I DO NOT receive all the information that is passed down to my supervisor

The items that made short, coarse scales and fit previous literature were:

Scale 1: Lack of control over labour reproduction (Standing, 1999)
H=0.40, Rho=0.68
F5 There is little opportunity for me to move to another position
F22 My career track doesn't lead to a leadership position
F23 My previous work experience is valued very little
F30 My job is to follow set of procedures

Scale 2: Lack of control over the proceeds of output (Standing, 1999)
H=0.49, Rho=0.58
F6 I have a low wage (Revised to: I earn less than other similar workers)
F10 My job requires only basic qualifications (Revised to: My job could be done after basic training)
F16 I earn near to the minimum wage required by law here

Scale 3: Lack of control over the means of production (Standing, 1999)
H=0.37, Rho=-.56
F19 Students are added to my classroom without my input
F20 I have little input into deciding which types of assessment are used
F24 I focus little on my career aspirations

Scale 4: Lack of control over self (Standing, 1999)
H=0.43, Rho=0.55
F15 I am replaceable as a worker
F18 I don't participate in making budget decisions

Due to the strength of several of the short scales, the items were not excluded but were retained if they conceptually fit previous research from Standing (1999) and Connell (1985) and formed scales with other items. The response categories were also revised for these scales to be more robustly tested in the final data collection.

Fulfilment scale results. In the pilot of the Fulfilment items, Mokken Scale Analysis automated item selection procedure was run with 31 hypothesised items and 158 valid responses. Of the 31 items tested, 30 were retained in the automated item

selection procedure. The item that was excluded was W21, "Seeing student success makes my work worth the effort". None of the participants disagreed or strongly disagreed with the statement. This meant that it was so different from the other items, that it could not be considered as measuring the same latent variable as other items. The 31-item scale had a Loevinger's H=0.46 meaning the items were moderately scalable (Sijtsma & Van der Ark, 2017). The lowest performing item was found to have a Loevinger's H=0.33. Nine items scaled with the other Fulfilment items but, to reduce the length of the questionnaire, items were excluded one at a time until all items were at least H=0.35. The items excluded were:

W1	I feel competent in my job
W2	I know I am able to execute my job properly
W3	I am good at the things I do in my job
W17	I make a difference in the lives of my students
W18	I see that my work has an impact when my students are successful
W20	I am a valuable person to my students
W19	Students gain knowledge because of me
W4	I have the feeling that I can even accomplish the most difficult tasks at work
W5	When I am at work, I feel competent to achieve my goals

The items that were lower functioning on the scale tended to be more individual than the rest of the items focused on interactions at school. Conceptually, it made sense to move away from the standard self-determination theory items and focus more on the contextual experiences of teachers. The 21 items that remained had a scale Loevinger's H=0.54, meaning the items were strongly scalable with Rho=0.95 and with the lowest performing item having an item Loevinger's H=0.44.

Other items in the scale were modified for clarity and the modifications can be seen in Appendix K. Two items were added at the difficult end of the scale to increase the discriminating power of the scale. The item "At this school, I get a chance to show how capable I am" was created to be a more meso-level competence item compared to

the items removed. Also, the item "The stress from teaching at this school is worth it" was created to be a more difficult version of W21 "Seeing student success makes my work worth the effort" which was removed for having little discrimination power.

Marketisation scale results. In the pilot of the Marketisation Scale items, the automated item selection procedure was run with 47 hypothesised items and 51 valid responses. The scale split into items that did not scale and two moderate scales. Five items were removed because they did not scale with any other items. The items that were removed were:

I7	My school is managed by a group with a recognisable brand name
I13	Multiple kinds of performance evaluation happen at my school (for example, teacher evaluations, lesson observations, goal setting, etc.)
I17	Staff are encouraged to deliver "customer service" to parents
I27	There is a hierarchy of status in my school based on national origin
I46	Staff members may be expected to teach outside of their area of expertise

The remaining items were found to create two scales with significant numbers of items, one scale with 35 items and another scale with 7 items. The 35 items scale had a Loevinger's H=0.43 meaning the items were moderately scalable (Sijtsma & Van der Ark, 2017). The lowest performing item was found to have H=0.30. Eight items scaled with the Marketisation items but to reduce the length of the questionnaire, items were excluded one at a time until all items were at least a Loevinger's H=0.35.

The items excluded were:

I9	The group that manages my school promotes the idea that higher school fees guarantee a better education
I11	The group that manages my school is influenced by other business interests
I14	My school implements changes to adapt to school market expectations
I15	My school treats parents as customers
I16	My school's finances are often the most important factor for decision-making
I26	Many teachers leave my school at the end of the school year

I28 There is a social divide between teaching assistants, teachers, and administrators
I31 I am ranked against other staff members according to my performance

The 27 items that remained had a scale Loevinger's H=0.50, meaning the items were strongly scalable with Rho=0.95 and with the lowest performing item having an item Loevinger's H=0.36. From this analysis, I decided to retain two of the lower performing items for the large-scale data collection. I28 and I31 both met the threshold for H-coefficients greater than 0.30 and may have been affected by the small sample size for the pilot. However, the items seemed like they should be re-tested because of their prominence in the interviews. Item I28 was retained with the same wording as the pilot and I31 was reworded to "I feel like my performance is compared against that of other staff members". The items of this scale were conceptually linked to the indirect influences of marketisation and was renamed Business Influences.

The items hypothesised as *marketisation* created a second scale with seven items. These items seemed to make a more nuanced analysis of the extent to which a school is run as a for-profit business. The scale was named EduBusiness. The items created a strong scale with a Loevinger's H=0.55 and Rho=0.87. All seven items were retained for the large-scale data collection. One more item was included to fill a gap in the pilot - "Earnings from the school benefit the school's managing group."

Other results - Outcome space adjustments. The third building block of a measurement model is the outcome space (Wilson, 2005). The outcome space of a questionnaire describes broadly how the respondents can record their knowledge or how their knowledge can be judged on each item. In a questionnaire with fixed-response items, the outcome space is the choice of response categories. Response categories need to be chosen carefully so that they are stated in a way that is "enabling

respondents to speak" (Enos, M.M., 2001, p. 62). No middle, neutral category was included because it has been demonstrated to be used by respondents who do not wish to participate or are avoiding an item that is potentially sensitive or politically charged (Wright & Masters, 1982).

The pilot illuminated many changes that needed to be made to the outcome space. Initially the outcome space for the Control and Lack of Control scale items included the categories: Describes my work perfectly, moderately describes my work, slightly describes my work, does not describe my work at all. The other scales all used Likert-type response categories of strongly agree, agree, disagree, strongly disagree. The scales did not function well in the pilot analysis, partially because of inconsistencies in rating scale usage. This was changed to match the other items for the large-scale data collection. Changing the outcomes space to be the same across the questionnaire was likely to have also simplified the process for respondents.

In the demographics section, the items and their response categories were carefully considered. The demographics were placed at the end of the questionnaire, so respondents were aware of what information they had shared before they were asked to report any personal information. Respondents were asked what their position was in the school, what age students they taught, their gender, and several questions attempting to ascertain the type of school (public, private not-for-profit, private for-profit) and its size.

There were a few difficult issues with the outcome space for demographics. The pilot had a significant number of people who labelled themselves *other* types of teachers, confusing the filtering question at the beginning of the questionnaire. For the large-scale data collection, the labels were changed to include a variety of different types of teacher; full time teacher, part-time or job share teacher, teaching assistant,

substitute/relief teacher, teacher trainee/student teacher, lead teacher/head of department, para-professional/shadow teacher, librarian, literacy, tech coach or other teaching and an *other* category. This filtered out non-teachers and administrators while including a wider range of teachers in the selection.

For the large-scale data collection, it was important to know if teachers were international school teachers or not. To clarify this, respondents were asked the country of their national origin and then were prompted to respond whether they were currently working in the country of their national origin. If they responded that they were working in a different country than their national origin, they were then asked to report in which country they were currently teaching. With the understanding that teachers may not know exactly the type of school (public, private etc.) they were working in, they were also given the opportunity to list the name of the school instead. At this point, they were also reminded that the data collected would not be used to identify them and would be coded with the name of the school deleted. The outcome space adjustments simplified the process for respondents, clarified demographics and generally improved the questionnaire to be ready for large scale data collection.

Stage 2 Limitations. The main limitations of Stage 2 of data collection and analysis were the limits of researcher judgment and the limits related to the pilot questionnaire sample. As stage 2 relied heavily on data generation, judgment played a major role in what was created. My own judgment about the constructs, items and analysis led the data generation. While the two quality analysis methods of the pre-pilot and pilot in Stage 2 were intended to find errors, these methods were not useful in identifying items that should have been included but were left out. It is very possible that the constructs were under-defined or that not enough items were created.

The second main limitation is related to the sample for the pilot questionnaire. For the Fulfilment and Control pilot, the use of social media as the main distribution tool ensured that most of the participants were native English speakers. The Marketisation and Buffering pilot was distributed in the UAE and had a more diverse response pool. The Marketisation and Buffering pilot was purposefully limited to a single country, so it did not have a large sample, which is a limit. Straat, Van der Ark, Sijtsma (2013) suggest 250-500 participants for Mokken Scale Analysis to make high-stakes judgments when item quality is high. These were low stakes for item design, but the items were also not considered high quality yet. While both pilots had smaller sample sizes than would have been ideal, they were useful for this stage of the research.

Methods Stage 3 - Measurement and Contextualisation

Stage 3 of the methods was aimed at creating measurement models from each scale, analysing the data with regression and path analysis to find the relationships between the scales, and using teachers' stories to contextualise the findings of each scale as well as the overall relationship. All the remaining items were included in a single questionnaire that was administered to a sample of teachers. This single questionnaire investigated each hypothesised construct with a larger number of participants which made it possible to analyse the relationship between the constructs for all participants. It was in this final stage that the research questions were finalised.

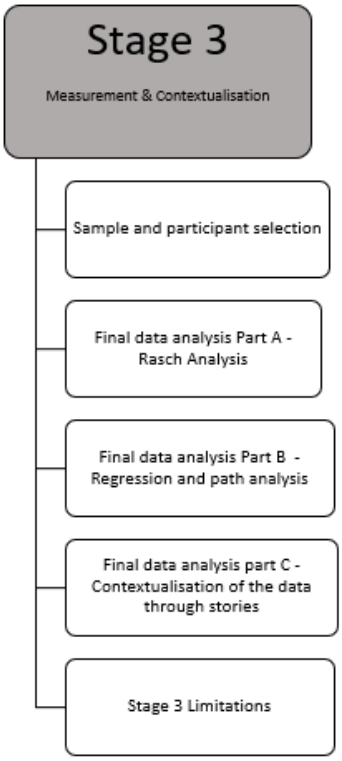


Figure 4. Stage 3 Methods Organisation Graphic.

The fourth and final building block of measurement (Wilson, 2005) is creating a measurement model and evaluating its effectiveness. To be considered a measurement model, Wilson (2005) states that the analysis method must have an outcome that describes the distance between each respondent and the responses on a construct map as well as the distance between different responses and different respondents (p. 109). This focus on distance means that the analysis creates something akin to a ruler with the items, then the distance between items performs like the measurement unit and the respondents can be understood as falling along observable distances along the ruler. Rasch measurement (Rasch, 1960) was chosen as the analysis method to give more in-depth analysis about the quality of the scales. The connection between the different measures was investigated with regression analysis and path analysis. The sample, analysis methods and limitations are described in this

chapter, but the results are included in the findings chapter. In the final step, stories of teachers were chosen to contextualise the findings of each scale and elaborate the quantitative data with qualitative data (Brannen, 2005). The steps of Stage 3 can be seen in Figure 4.

Final sample and participants. For the large-scale quantitative data collection, the intent was to find a range of teachers including a significant number of teachers working in private non-profit schools and different types of for-profit schools. Teachers aspiring to international school jobs or looking to change jobs between internationals schools were targeted because they would represent many different types of schools in many different countries.

For the large-scale quantitative data collection, a "time-location sampling" (Magnani, Sabin, Saidel & Heckathorn, 2005) strategy was used. Time-location sampling is based upon the idea that "some hidden populations tend to gather or congregate at certain types of locations" (pp. 569-570). To be able to include as many teachers working for for-profit education management organisations as possible, I attended four international hiring fairs aimed at current international school teachers. I attended international hiring fairs in Bangkok, Thailand, Dubai, UAE and London, England.

I approached teachers in-person to participate and, if they agreed, they were given an iPad linked to the online questionnaire. The questionnaire was administered online through Online Surveys (Jisc, 2018). I approached teachers who spent time in common spaces at the fair, so I likely did not meet all the teacher candidates. Unfortunately, this means that there is no way to calculate a true response rate. A total of 204 responses were collected with 87 (43%) collected at two fairs in Bangkok, 66

(32%) collected in London and 51 (25%) collected in Dubai. The participants' demographics for the final questionnaire can be seen in Table 5.

Table 5

Final questionnaire demographics (n=204)

Gender	
Male	93 (45%)
Female	111 (55%)
Transgender or Gender non-conforming	0 (0%)
International Status	
International Teacher	169 (83%)
National Teacher	35 (17%)
Position at the School	
Full-time teacher	172 (84%)
Part-time or job share teacher	5 (3%)
Teaching assistant	9 (4%)
Lead teacher or Head of department	16 (8%)
Other	2 (1%)
Years working in a school	
Less than 5	46 (23%)
5-15	115 (56%)
More than 15	43 (21%)
Did not say	1 (0%)
School size	
Fewer than 500 students	72 (35%)
500-999 students	60 (29%)
1000-1999 students	52 (25%)
2000+ students	20 (10%)
Type of School	
Government (State, public, etc)	48 (23%)
Private	155 (77%)
Private For-profit	92 (45%)
Private Non-profit	60 (29%)
Did not answer	1 (0%)
Country/Region of Employment	
North America	7 (3%)
South America	1 (0%)
Africa	10 (5%)
Asia	82 (40%)
Australia and Oceania	6 (3%)
Europe	41 (20%)
Middle East	56 (27%)
Did Not Respond	1 (0%)

Final data analysis Part A- Rasch analysis. Before the final analysis, Mokken scale analysis was conducted again including all items from the Buffering, Control, Fulfilment, Lack of Control and Marketisation scales together. This was completed so that the final results were not biased by the assumptions of the pilot scale results. The pilot was conducted in two separate administrations because the initial conception of each construct was too many items to be administered in a single sitting. Unfortunately, being piloted separately, it was assumed that the items from the two pilots did not overlap and it was not possible to test the overlap until the final questionnaire data was analysed. Through iterative testing of different combinations in Mokken Scale Analysis, four scales were retained. Three of the scales combined items from the two pilots. Each scale was then analysed and optimised using Rasch analysis.

For the large-scale data analysis, Rasch analysis (Rasch, 1960) was employed. While Mokken Scale Analysis is useful for investigating the unidimensionality of items and the characteristics of each scale, the output is the raw score rather than a measurement of the latent variable. Wright (1996) describes the outcomes of Rasch analysis that "only Rasch analysis constructs the kind of objective linear variables that social scientists need to quantify their constructs, map their fields of study, test their hypotheses, and measure the values of their social programs" (p. 24). Rasch analysis is useful for when "we want to use the variable we construct like we would use a ruler. We want to see where the people (or students or patients or busy intersections or artefacts or football predications) line up on the 'yardstick' we have constructed with our measures" (Enos, M., 2001, p.10). Rasch analysis transforms ordinal data into interval level measures of each latent variable and these measures can then be used in other statistical analyses (Bond & Fox, 2015, p. 1). The outcomes of the Rasch model

are these interval level measures (often called *Rasch-calibrated person measures*), an ordered item hierarchy, and an analysis of how well the data fit the model. Item fit statistics describe the robustness of the scale and, therefore, how well the scale can be used to identify patterns. Rasch analysis also makes it possible to detect item bias through differential item functioning (DIF) and to analyse individual error rather than relying on overall measurement error for the scale.

The basic assumptions of the Rasch model are that each respondent can be characterised by an *ability*, each item can be described as having a *difficulty* and that items will be *easier* for respondents to endorse or *more difficult* for respondents to endorse based on their ability. The difference between the ability and difficulty then allows computation of the probability of certain responses. (Bond and Fox, 2015). The Rasch model "specifies a distribution function for the potential responses of a given person to a given stimulus of a certain set of allied stimuli, and this distribution function depends upon a parameter characterising the person and a parameter characterising the stimulus" (Rasch, 1960). For this research, the rating scale model was chosen because all the items share the same response categories. While this imposes strict fit expectations on the data, it also yields the simplest explanation and makes the results simpler to interpret (Wright, 1998). Mathematically, this relationship between ability and difficulty looks for dichotomous items looks like:

$$\log_e\left(\frac{P_{ni1}}{P_{ni0}}\right) = B_n - D_i \quad (1)$$

In this equation B_n is the ability of subject n, D_i is the difficulty of item I, P_{nil} is the probability that subject n will succeed on item I and P_{ni0} is the probability of failure $1\text{-}P_{ni1}$.

As this questionnaire included four response categories throughout, it is the rating scale model for polytomous items. Therefore, the formula for calculating item difficulty and respondent ability is related to the dichotomous model but the probability is calculated at each threshold (e.g. between Strongly Disagree and Disagree) for whether a respondent will endorse the adjacent category. The rating scale model is used which mathematically looks like:

$$\log_e\left(\frac{P_{nij}}{P_{ni(j-1)}}\right) = B_n - D_i - F_j \quad (2)$$

In this equation, the probability is calculated between the thresholds where j is one category and j-1 is the previous category and F_j is the value of the Rash-Andrich Threshold for the scale.

There are several strengths to using Rasch analysis. The most important strength of Rasch modelling is that the outcome is independent of the sample or the specific items that are used for measurement. By employing Rasch analysis it "renders it possible, in the analysis of the data, to detach the personal parameters from the stimulus parameters, and vice versa. And furthermore, we may check the adequacy of the model itself independently of both sets of parameters" (Rasch, 1960, p. 321). The sample of respondents, therefore, does not need to be tested for its representativeness of a larger population. Instead, what is required is a range of responses demonstrating systematically varying levels of ability across differing difficulty items. Instead of a specific set of items that have demonstrated previous reliability, what is needed are a set of items that allow respondents to demonstrate a range of ability and can discriminate between these abilities. Under these conditions, if the data fits the model across a range of responses, then the items produce useful measures of the respondents for the latent variable. The quality of the Rasch model

being independent of the items and the sample is called "specific objectivity" (Rasch, 1977). This means that comparing the items is not dependent on the abilities of the respondents and that comparing of the abilities of the respondents is not dependent on the items on which they are measured. When the data fit the the Rasch model, the latent variables have "sample-invariant interpretability" (Wright, 1977). This means that the "difficulties of the items in question remain statistically equivalent over the various kinds of persons to be measured with these items. This is exactly the condition investigated when evaluating the data for fit to the model" (Wright, 1977, pp. 220-221). These properties of Rasch analysis made it an acceptable philosophical fit with feminist analysis principles, which is discussed further in Chapter 5.

Rasch analysis was chosen for this investigation due to its philosophical strengths of allowing for a range of experiences to be considered as a pattern and also due to its strength as a quantitative method. Rasch analysis is a different paradigm than item response theory (IRT) models. In Rasch analysis, the data is tested for how well it fits the model rather than creating a model to fit the data. If the data do not fit the theory of the Rasch model (that items will become easier as the ability of the respondent on the latent variable increases and more difficult as the ability on the latent variable decreases), then they are probably not useful as measurements. Rather than adding terms to create a model to fit data that may be multi-dimensional, the model is set, and the items are judged on their fit to the model. The other strength is the appropriateness of Rasch analysis for working with ordinal data. Classical test theory (CTT) techniques like Factor Analysis require linear, interval scale data input and are often used for ordinal data in ways that may be inappropriate (Wright, 1977). There are many techniques that have been implemented to overcome the incompatibility between data type and analysis, like using polychoric correlation

matrices instead of Person's correlations, avoiding Cronbach's alpha (Basto & Pereira, 2012), or using Spearman's correlation. Unfortunately, these fixes treat the disconnect between the data and the analysis as a calculation problem rather than remedying the design to appropriate analyse ordinal data. Wright and Linacre (1989) describe how applying conventional analytical techniques to raw, ordinal data is likely to lead to misleading conclusions and demonstrate how the Rasch model does not have this problem.

The Rasch analysis results are reported in the findings section in Chapter 4 with the psychometric properties of each scale including the strengths and weaknesses of the scale compared to every standard, which items were included in the scale, which items were excluded for DIF and the linear variable defined by the items. The Rasch calibrated person measures were also obtained and analysed. For the analysis, the person sample mean was fixed to 0 and the user scaled units per logit was fixed to 1 so that the results were measured in log-odds units (logits). When the data fit a Rasch model, the logit difference between any person or any item on the scale maintains the same value (Wright, 1993). Logits form an equal interval scale that is additive and can be easily used for further analysis. The further analysis in this investigation was done with regression, multiple regression and path analysis as detailed in the next section.

Final data analysis part B - Regression analysis and path analysis. The final step of quantitative data analysis was regression analysis and path analysis. Rasch analysis creates Rasch calibrated measures for each scale that can be used in further analysis. Person measures are calibrated to use the same metric (logits) for each set of items. Bond and Fox (2015) describe one of the main strengths of Rasch measures as departing from the original ordinal level data to the more robust interval

level measures. After this process, the "measures derived from Rasch analyses may be considered as interval and therefore permit the use of the wide array of statistical calculations that abound in the social sciences" (Bond & Fox, 2015, p. 1). To identify the relationships between the different measures, the Rasch calibrated measures were used in regression analysis and multiple regression analysis. Regression analysis takes the data a step beyond what was initially collected to allow inferences based on the relationship between two variables (Field, 2009, p. 198). Multiple regression analysis is useful for understanding the dynamics underlying a variable when it may have multiple predictors like behaviour, attitude, or feelings (Meyers, Gramst & Guarino, 2016). The limit of regression and multiple regression analysis are that the variables only have two options: predictor variables (independent) or outcome variables (dependent). This means that less direct relationships – where variables act on each other in more complex ways – are not possible to analyse. Further analysis can be conducted investigating interactions or non-linear relationships between the variables. In this research, the next step chosen was to find an overriding model for the relationships between the scales through path analysis.

Path analysis is essentially a more complex extension of multiple regression (O'Rourke & Hatcher, 2013, p. 109). While related to structural equation modelling, path analysis is best suited for analysing observed variables rather than integrating a model with latent variables. As the Rasch calibrated measures were already calculated, a full structural equation model integrating the measurement model with the structural model was not necessary. Instead, path analysis was used to add the structural model to the previously calculated measurement models. While regression analysis only allowed direct effects, path analysis allows investigation into how different predictor variables affect each other and how they may have both direct and

indirect effects on the outcome variable. Cavanagh and Romanoski (2006) demonstrate the usefulness of conducting Rasch analysis before different types of structural equation models and the different but complimentary results that combining these two methods allows. Yan and Cheng (2015) describe the mismatch of using ordinal level data in classical test theory analysis and use Rasch-calibrated measures in a path analysis as well. To conduct a path analysis, the data must be interval level, normally distributed and be additive data. Fortunately, Rasch analysis transforms ordinal level data into interval level measures, so it is well-suited for this combination of methods. The results of the path analysis are included in the findings section.

Final data analysis part C - Contextualisation through storytelling. The final method of this research was to relate the quantitative findings to the interview data. The aim was to retell the experiences of teachers to fit Letherby's (2003) expectation that "the researcher who identifies as feminist (pro-feminist) needs to choose a method which enables women's experiences and voices to be distinct and discernible" (Letherby, 2003, p. 102). As most of the interview participants were women, the final contextualisation included stories of four women and a mix of other participants. Mason (2006) suggests that mixed-methods research has the strength of multi-dimensionally analysing problems. While the findings of this research were primarily quantitative, they were based in individual teachers' experiences and could be related back to personal stories teachers told about their work. Qualitative data can be related to quantitative findings by "using creatively mixed methods [so that] we can begin to assemble data and argument that can be woven into meaningful and empirically well-founded social theory" (Mason, 2006, p. 15). She describes the context as the "associated surroundings" (p. 18) that, in combination with other findings, can be "consolidated, or integrated, to produce a fuller or more valid or

robust picture" (p. 20). Brannen (2005) clarifies how triangulation of qualitative and quantitative findings is not automatic because corroboration is just one of many possible outcomes of mixed methods. She describes how narratives of experiences "result in a more holistic picture of people's understandings than a conventional survey analysis would provide and elucidate the meanings that research participants attribute to their practices and actions" (p. 182). In this research, the qualitative interviews were used to insert context and a personal story to understand how the quantitative results related to the experiences of teachers. The qualitative data was used as an elaboration of the quantitative data, exemplifying how quantitative findings may apply to individual cases (Brannen, 2005). While each item of a scale was decontextualised to find the patterns, the teachers' stories recontextualised them in relation to scale as a whole. Brannen (2005) argues that "contextualization is a critical part of a multi-method strategy in creating and making sense of data" (p. 182). Without this connection between the qualitative and quantitative data, it would be difficult to discern the individual experiences that could be described by the quantitative findings.

The process for creating these examples was to compare each scale against the interviews and find an interview participant whose experiences broadly matched the findings of the scale. The interview notes were reviewed to find a match of interesting stories that fit the items of a scale. While many participants had individual statements which could be compared to the scales, the choice of whose stories to tell was concerned with finding contexts where these items existed in a connected manner for a single participant. After the participant was chosen, I wrote a re-telling of the participant's experiences integrating their stories and some of their own voice with the quantitative findings.

Stage 3 limitations. The limits of Stage 3 of the research are related to the data collection sites including issues with sample and sample size. There was some bias built into collecting data from teachers at hiring fairs and some limits for the sample due to who attends those fairs. Unfortunately, the hiring fairs are aimed primarily at teachers looking for full-time positions and rarely used by any other teachers such as those looking for part-time, job share, relief or teaching assistant positions. The final distribution of respondents was heavily skewed toward full-time teachers with zero teaching assistants included in the sample. That means that no claims can be made to understand the wider experience of all the workers considered *teachers* in international schools.

Another limiting consideration is due to the fact that all of the participants were teachers looking for a change in position. It is possible that some participants were searching for new jobs because they disliked their current position. This may have affected their responses to the questionnaire. However, this is not the only reason that teachers seek new positions. International teachers tend to stay in their positions for short periods of time and leave for a variety of reasons. Some teachers may have been leaving positions in for-profit schools or may have worked in them previously and this factor was included in the data collection. By attending multiple job fairs, I was able to capture the views of many teachers who had worked in different kinds of schools around the world. While the sample may not be completely representative of all international teachers, the data were useful for identifying the range of experiences across contexts. This would not have been an acceptable way to gather data if I intended to summarise the raw data and generalise from that, but it was useful for non-parametric statistics.

As the data were collected parallel to teachers interviewing for jobs, the respondents were potentially in a different mood than they would be normally, and this may have influenced their responses. In speaking with teachers at the hiring fairs, the teachers were generally in the mood to be reflective about their teaching career, their current position and what they wanted in a new position. While many were looking for new jobs, there is no reason to think they were negative about their current positions. At the very least, while in interview mode, many were cautiously considering their current position rather than focusing only on the negative. As there were only a few fairs to attend, the sample was limited in size. The final collection was 204 respondents but for path analysis only 128 responses were usable. The low number for the path analysis is due to being limited to only responses with no missing data across all the variables. Although this is a generally acceptable number of cases, the sample size is on the low side.

The final step of the methods was to relate the scales back to individual stories from the interviews. While this contextualised the data and increased the authenticity of the findings, there is no increase of generalisability or reliability of the quantitative findings. It is not surprising that the qualitative and quantitative data fit together because the items for the scales were based on the qualitative analysis. The addition was simply to contextualise the scales and make them more relatable. The limits of this analysis are that I do not have the participants' actual reports based on the scale, so some assumption is made that they would have responded positively to the items that I recognised in their stories. While it would have been interesting to have the participants look back over the scales and see if they identified themselves in the findings, the amount of time that has passed since the initial interviews means that the relationship would have been unpredictable. As the analyst, I have heard a larger

range of stories and I see how individual experiences have formed patterns in the qualitative analysis and quantitative analysis. The interview participants, for the most part, seemed to assume that their experiences were unique. If the scale were used as a stimulus, participants may approach it like a horoscope, seeing themselves in every scale even if it was not a good fit. They also may have reacted that their individual experiences could not be described out of context. To add context to the findings, this method had limits but was the most appropriate connection between the qualitative and quantitative data.

Reliability, Validity and Trustworthiness

Any piece of quantitative or mixed-methods research requires a discussion of reliability and validity. Of the set of methods that were used in this investigation, some have analysis that relates to these two principles of trustworthiness. While these two discussions are typical of standard research, they may not go to the lengths that a feminist research approach would expect. This section discusses classical reliability and validity issues but continues beyond to discuss the two key issues of trustworthiness: authenticity and integrity.

Reliability. Reliability is a test of consistency or reproducibility. It can be stability of ratings between different raters, reproducibility across time, or consistency of measurement within a scale itself. Linacre (n.d.-b) describes the Rasch analysis perspective on reliability as the probability that respondents with high measures actually have higher measures than respondents with lower scores, renaming it "reproducibility of relative measure location". As there was no previous instrument developed to measure these constructs, validity and reliability evidence were gathered

throughout the phases of development (Wilson, 2005, p. 161). During the pilot stage, the data were tested for the scalability of the items, the unidimensionality of the scale, and the local independence of items. This was the first step to ensure that the items had reliability as a scale. The reliability of each scale was reported with the Rho statistic. Scales were only considered to have acceptable reliability with a Rho statistic >0.70 (Meijer, 1994). For the final data analysis, Rasch reliability coefficients were used to determine the consistency of the scale. For Likert scales, reliability is often reported with a coefficient like Cronbach's alpha which is used as the "value is what we expect of an 'average person' from that sample on that item" (Wright & Stone, 1988, p. 157). These coefficients are calculated for the proportion of *true person variance* to the observed variance by the instrument. As true variance cannot be known, it is calculated based on the sample. Cronbach's alpha is calculated based on the analysis of variance. The calculation is based on the repeatability of raw scores which are treated like continuous variables even though are ordinal data (Linacre, 1997). Unfortunately, this tends to overestimate error variance. Because the formula calculates inter-item covariance, respondents who answered all the items the same (those on the very high end and the very low end) will have less error variance than those in the middle. Variation in the probability of a 2 and a 3 response for respondents in the middle of the items will be expected but may appear to be error rather than a normal characteristic of a measurement instrument. For these reasons, Cronbach's alpha overestimates the variance which leads to a misleading reliability coefficient (Linacre, 1997). It is suggested that aiming for high Cronbach's alpha coefficients to prove reliability can be a threat to validity as "maximizing internal consistency almost invariably produces a scale that is quite narrow in content" (Clark & Watson, 1995, p. 316). The use of Cronbach's alpha to determine reliability was not

considered suitable. Rasch measurement takes a different approach by collecting reliability information not only about the consistency of responses, but also about how reliably the items function in the scale.

Rasch *person reliability* is generally equivalent to a traditional test reliability. Low person reliability means that there are a small number of items or a narrow range of respondents (Linacre, 2000). The person reliability is found by calculating the individual errors, squaring and averaging them to produce the actual average error variance (Wright & Stone, 1988). Compared to Cronbach's alpha, person reliability is the average of all the individuals rather than the reliability of the average person. In Rasch analysis, high person reliability comes from variance in the ability of respondents in the sample, the number of items tested, the number of response categories and the targeting of items on the sample (Linacre, 1997). Person reliability is generally equivalent in interpretation to Cronbach's alpha, but should be interpreted in conjunction with person separation as well. Reliability greater than 0.80 is considered good if the person separation is also greater than 2.0. Together, this means that the instrument is sensitive enough and can discriminate between two or three levels of respondents without adding more items. The four final scales in this research met these criteria as can be seen in Table 6. Rasch *item reliability* does not have a traditional equivalent but depends on variation in range of item difficulty and the sample size while it is independent of test length (Linacre, 1997). An item reliability greater than 0.90 and item separation greater than 3.0 means that the person sample is large enough to confirm the item hierarchy. This may be evidence for construct validity as well. The four final scales in this research met these criteria as can be seen in Table 6.

The Rasch calibrated person measures had acceptable reliability and distribution to be used for regression and path analysis.

Table 6

Rasch scale reliability results

Scale	Person error	Item standard error	Person separation	Item separation	Person reliability	Item reliability
Buffering/Fulfilment	0.42-1.84	0.14-0.15	3.32	4.60	0.92	0.95
Business Influences	0.48-1.86	0.13	2.64	4.98	0.87	0.96
EduBusiness	0.64-1.9	0.14	2.48	7.26	0.86	0.98
Lack of Control	0.45-1.85	0.13	3.18	4.21	0.91	0.95

Validity. The validity of a piece of research is a judgment about how well the "the degree to which empirical evidence and theoretical rationales support the adequacy and appropriateness of interpretations and actions on the basis of test scores or other modes of assessment" (Messick, 1989, p. 741). Cherryholmes (1988) describes the importance of construct validation which "as critical discourse attempts to create conditions whereby biases and misperceptions of researchers and subjects-objects can be addressed and examined, if not overcome" (pp. 433-434). For this investigation, both the Mokken scale analysis and Rasch analysis contribute evidence toward validity.

The technical quality of items and initially investigated in the pre-pilot and pilot. The pre-pilot asked respondents to discuss their reasoning out loud through the Three-Step Test Interview (Hak, van der Veer & Jansen, 2008). Using the instrument to elicit participants' reasoning about the items means "researchers may obtain information not only on the content validity of an instrument, but also on its construct validity" (Sandelowski, 2000, p. 252). As participants discussed the items, they related them to their own experiences. If an item was dismissed by a participant as

irrelevant or seemed out of place, the item was changed or removed. It was possible to see whether the participants read the items with the intended meaning, if the wording was confusing or if the words had more than one possible interpretation. Analysing and revising the items added to the validity of the individual items by ensuring they portrayed what they were intended to mean and be understandable.

The quality of the items within each scale was also tested. The pilot analysis with Mokken scale analysis was used to determine scalability by using Loevinger's H. Items with an H coefficient less than 0.3 were considered *unscalable* meaning they had low construct validity as they were "low quality in the context of the item set" (Sijstma & van der Ark, 2017). While those items may have been perfectly fine on their own, they were not demonstrably part of the construct and were therefore removed from the item set. For the final scales, the Rasch fit statistics of the items contributed to evidence of item quality. Items that did not fit the Rasch model were excluded. Fisher (1991) argues that Rasch measurement's strict calibration of items that do not depend on respondents and measures that do not depend in items are evidence of construct validity (p. 4). Item targeting as demonstrated in the Wright Map (also known as a Person-Item Map) and Construct Key Map of each scale is also evidence of validity as the items are applicable to a range of abilities across the construct.

A Feminist View of Trustworthiness. The terms associated particularly with reliability and validity of quantitative research are related to how reproducible, universal, objective, hard, outsider or politically neutral the methods are. The control of the researcher over their methods and the distance between researchers and the researched gives an aura of outsider omniscience. This is as if the world can be understood best when the researcher is disconnected from the world, has no personal

interest or history and is achieving reproducible results regardless of context, time or location (Sprague, 2016). Westmarland (2001) reminds us that quantitative approaches are not more objective as "what has traditionally been seen as a strength of quantitative research, namely objectivity, has been shown to reflect the subjective knowledge of the researcher and hence reveals the false dichotomization of objectivity and subjectivity" (p. 27). Oakley (2000) demonstrates that personal experiences and perceptions affected the thinking the forefathers of so-called *hard* science, influencing what are considered *settled debates* about human behaviour, race and gender all the way to p-values, statistical significance and effect size. Quantitative research does not sit outside of the judgment of the researchers, even though numbers may seem objective or neutral. Proving that I was objective in my findings, that teachers' experiences are reproducible or generalisable would be contrary to a feminist ethic of quality research. Ladner (1987) asks why any researcher would think it was a good idea to be "'objective' (indifferent, disinterested, dispassionate, value neutral" (p. 74). As a researcher passionate about the topic, my interview participants and their stories, it was impossible to be indifferent or disinterested. While creating scales, my own judgment about what would best represent each construct and how teachers would respond to items were an important part of the process. As a critical scholar, I never aimed to be value neutral but instead to tell the stories of participants and find the patterns that emerged, which were quantitative in nature. While the scales created in this research have quantitative reliability and demonstrable validity meeting many of the expectations of quantitative, positivist research, this must be interrogated further.

Feminist principles were used to frame the research from start to finish and influence claims about trustworthiness. With a feminist lens, this research has

particularly focused on interacting with the participants, listening to their stories, privileging teachers with less authority, trusting questionnaire respondents and modifying the research around their responses. These actions may not precisely meet common expectations of reliability or validity but "feminist scholarship can be valid and rigorous as well. However, before criteria for evaluating feminist research can be determined, feminist goals must be understood" (Dallimore, 2000, p. 162).

The goals of this research were to understand the experiences of teachers working in marketised contexts and to identify the patterns of their experiences. Rather than stopping at an analysis of the reproducibility or objectivity of the research, this discussion of trustworthiness will follow Oakley's (2000) framing of feminist research that "the mark of 'good' research is the awareness and acknowledgment of error, and that what flows from this is the necessity of establishing procedures which will minimise the effect such errors may have on what counts as knowledge" (Oakley, 2000, p. 72). The rigour of the research then becomes based on how well the experiences of teachers have been understood, translated into items and made into scales that reflect teachers' experiences. From a feminist perspective, "validity involves gaining confidence in research findings by making sure that they make sense in practice. Validity then is demonstrated by showing that theories and researching finds 'work in the world'" (Dallimore, 2000, p. 164).

As a feminist piece of research, reliability and validity are not considered enough and outsider objectivity was not the aim. Dallimore (2000) suggests, we "need to evaluate feminist research either by a different set of standards or to reconceptualize some of these research standards" (p. 158). This does not mean that the research is of lower quality, but instead that different criteria for quality need to be identified and met beyond what has been presented. Steps were taken in this research

to enhance the trustworthiness based on feminist principles of collaboration and specificity (Dallimore, 2000).

Collaboration. Dallimore (2000) argues that validity in feminist research should be revised and framed in terms of collaboration based on Acker's (1991) premise that validity comes from "the adequacy of interpretation" (p. 145). The collaboration in this research came from integrating teacher judgment at every stage. Collaboration relates directly to trustworthiness, credibility, accuracy, and content validity of a piece of research because "collaboration is a concrete method by which feminist researchers can demonstrate the validity of both measurement tools and research findings" (Dallimore, 2000, p. 165). The interviews were conducted with a feminist approach, prompting participants to tell about their experiences with careful attention to the relationship between interviewer and participant. The decision to start the research process with interviews sent the research process on a specific trajectory. Listening to individuals tell their stories as the way to understand their experiences and hearing the context of those experiences weighed heavily on me as a researcher. By starting with interviews, it quickly became clear to me that the final product had to be worthy of the depth and complexity of these stories. I feel personally accountable to those who shared their experiences with me. The personal involvement of researchers is often discouraged "in the guise that this will minimise the supposed objectivity of the study" (Westmarland, 2001, p. 24) but the researcher is often closely and emotionally involved when knowledge gathering is based on the experiences of participants (Dallimore, 2000). Beginning with teachers' experiences contributed to the content validity of the research. The framing of the constructs was based on teachers' perceptions of their work rather than an imposed preconceived notion of work or teaching. Cherryholmes (1988) describes how researchers who fail to

problematise the content or constructs available "consciously or unconsciously adopt inherited discourses and meanings previously assigned to constructs and measurements. Social reproduction thereby invisibly and effectively continues without conscious interruption" (Cherryholmes, 1988, p. 428). The involvement of teachers in the process of construct development contributed directly to the authenticity of the research.

The pilot questionnaires allowed me to assess how authentically teachers' experiences had been translated into items by collaborating with teachers in different contexts than the original interview participants. By allowing teachers to discuss their thoughts about the items and how they would answer through the Three-step Test Interview (TSTI) (Hak, van der Veer & Jansen, 2008) pre-pilot, the quality of items was tested. This also allowed a select group of teachers to have a voice in the creation of the research. This process ensured that my own understanding did not stray too far from the everyday experiences of teachers and that my own expectations were questioned or confirmed by respondents. Collaboration "is an effective means for feminist researchers to demonstrate the validity of their findings and interpretations as well as the validity of the methods by which those findings are obtained" (Dallimore, 2000, p 167). This process contributed to the content validity of the questionnaire as pre-pilot participants voiced their opinions about which items made sense for them and which ones seemed outside of their experiences. Mokken scale analysis and Rasch analysis were found to be the most suitable for this type of research because "surveys, questionnaires, and interview protocols that use rating scales to collect psychosocial information can be thought of as structured 'conversations' between researchers and subjects" (Wright, 2001, p. 75). These quantitative styles of analysis value responses as informative of the quality of the items rather than assuming the

items are strong and the respondents are in error when results vary. Even through the stages of quantitative analysis, teachers' voices were the primary way to understand teachers' experiences in schools.

The final stage of reporting the findings was to relate each scale back to the experiences of the participants. This confirmed that the patterns from the large-scale quantitative analysis were authentic to the experiences of teachers working in highly marketised contexts and not simply a collection of random items that were quantitatively related. The fact that the stories of teachers fit the scales is an indication that there is significant evidence of construct validity. It also means that the research translates to a larger sample without losing its relevance to an individual's experiences.

Specificity. Traditional expectations for generalisability are unacceptable to feminist researchers as "the act of generalizing involves erasing differences in order to construct universal theories and claims" (Dallimore, 2000, p. 171). Because a "commitment to preserving individual differences among women is a fundamental characteristic of feminist research" (Dallimore, 2000, p. 171), feminist researchers aim for specificity instead of universalism or generalisability. In this research, the mixed methods process allowed participants' own experiences to directly influence the themes, the universe of possible items and the range of the items to create the constructs. While certain respondents were excluded because the scales were not useful for measuring them and some outliers were excluded for the final analysis, participants' experiences were not totalled, averaged, or excluded due to being exceptional. The interview data was used to describe the range of experiences rather than reduce the data down to the most common experiences between participants. In the quantitative analysis, teachers were not reduced to numbers but retained their own

individuality in the data. Instead of finding a relationship between *average* teachers or their most prevalent countable attribute, the quantitative analysis began with teachers' words and ended with words defining each construct alongside stories of teachers' experiences. Through the analysis, a larger quantitative pattern emerged but created a rich understanding of teachers' lives, not simply a number assigned to a person.

The specificity and individuality in the analysis continued through both quantitative and qualitative analysis methods. Although Rasch analysis and path analysis are quantitative methods, the data analysis was done in a feminist way that treated individual experiences as important, acknowledged variation in experience, allowed a large range of experiences, and did not base the measures of one person on any other person. A Rasch approach views the responses of people as "single-stimulus data" (Coombs, 1964) which considers the difficulty of the item, or how difficult it is to endorse, and the individual's ability, or ease in endorsing the item. There is an assumption that each person will demonstrate a unique ability rather than expecting different individuals to answer the same way. These principles were upheld to maintain the specificity of individuals' experiences in the research. Respondents were excluded from the Rasch analysis when the scale did not accurately measure them as individuals. Instead of imposing a scale and assuming that the error was stemming from individual response error, the individuals were not measured with the scale. In Rasch analysis, this is seen as a failure of the scale rather than a disbelief in the individual. While leaving out participants reduced the number of responses for each scale, it meant that the scale was more meaningful for each person that was measured, not imposed any anyone that it was not meaningful for and that the findings would not over-generalise. The use of Rasch analysis treated each individual respondent with integrity, allowed a range of responses, and paid attention to individual error.

As there was no previous instrument developed to measure these constructs, "the evidence (validity and reliability) that is gathered along the way is a means to achieve the goal of a sound instrument" (Wilson, 2005, p. 161). No single measure or outcome can prove the reliability or validity of the research, instead the process must be considered along with the purpose for how a sound instrument was created. While the technical data about items and scale construction gives some evidence of validity, the overall trustworthiness of the research must be followed through the entire process. Fisher (1991) describes the integrity behind measurement that measures must be created with ethical, political and aesthetic criteria based on trustworthy measurement instruments. In this research, the trustworthiness was determined by the feminist principles of collaboration with teachers and by the specificity with which their experiences were treated. This discussion of trustworthiness included both traditional and feminist perspectives to demonstrate the quality of the methods that were used so that the findings can be understood considering this process.

Ethical Considerations

This research was conducted following the University of Nottingham's ethical guidelines and maintained an awareness of any additional ethical considerations related to each data collection site. Multiple steps were taken to ensure that the research conducted could be considered ethical, including significant focus on consent of participants and the anonymity of participants. For the interview component of the research, the most significant ethical concern was how to ensure that participants were able to consent to being contacted and interviewed, that they felt no pressure to participate, and that their anonymity was maintained throughout the entire process. The initial contact of participants was done through social media rather than school

administration or work-related email addresses. This was done to allow teachers to participate without the knowledge of their employer. The two-step process of LinkedIn connection and response gave participants several points to decline to participate. If the teacher was willing to participate in an interview, they were guided to a secure online form to state their date for interview and to volunteer their preferred way to be contacted. LinkedIn is not a particularly good program for messaging, so participants provided another means of contact. I was wary of teachers using their work email addresses, in case they had an email program that was perpetually open or if they shared email addresses. Participants provided the information they were comfortable sharing and I communicated with them based on their preferences.

For the questionnaire components of the research, two-step consent was again part of the process. For the pilot questionnaire, participants were invited on social media. From an initial invitation, participants decided to follow a link and were additionally asked their consent to participate again at the beginning of the online administration software. For the large-scale questionnaire, I approached participants in-person and asked if they wanted to participate in a questionnaire. I answered any questions that they had and ensured that they understood that they could say no at that point. Informed consent was the first page of the web-based questionnaire. I clearly stated that I was not connected to the hiring fair events and that their participation did not have any bearing on their job opportunities. At each hiring fair, the organiser of the fair introduced me to the teachers and briefly explained my research. It was made clear to the teachers that their participation did not have any bearing on their chances of being hired. At any point, participants were able to quit the application and hand the device back to me without their answers being recorded.

Maintaining the anonymity of participants was of utmost importance in this research. When I met interview participants, I ensured that they felt comfortable with the process and me as an interviewer before we continued. I gave each participant the information letter (Appendix E) and discussed it with them. I explained the research aims and outputs to participants and told them about my expectations of their time. I explained their rights as participants, including the ways that I would maintain their confidentiality and their right to withdraw at any point. I informed participants that the data collected would be used primarily for the creation of a measurement instrument but that I would possibly also use anonymised statements from the interviews as examples in my dissertation or further publications. I also informed participants that any personal data collected would not be used in ways that allowed them to be identified. I assured them that their participation would not have any bearing on a future relationship. Interview participants were informed that I would be taking notes during the process, but that their identity would be anonymised. I often showed participants the code that I was using to ensure that their location and company were also anonymised. I asked permission for recording and allowed participants to reject being recorded. When interviews were conducted via Skype, the consent forms and participant information sheets were transmitted through file sharing and participants gave their verbal consent. At the conclusion of each interview, I gave the participants a debrief letter about their interview (Appendix F). The letter included a review of the purpose of the research and other specific information in their location about how to report labour abuses, information about counselling services for job-related stress and how to contact school inspection authorities, if applicable.

For the pre-pilot participants, their answers to the questionnaire were anonymous and were not included in the data collection. I was clear to the pre-pilot

participants that I wanted them to answer honestly, but that their answers would not be used as part of any data collection as the primary purpose was for me to identify issues with the items. I read some basic instructions to the participants about their role in the process (Appendix H). Some participants needed some further coaching to speak aloud about their thoughts on each item. I recorded these interviews and took notes using the form, an example of which is in Appendix I. While there were not as many steps for consent in that part of the process, the purpose of their participation was to develop the research rather than to collect data to be reported or published.

For the large-scale questionnaire data collection, participants were informed of the aims of the research and their rights as participants on the opening page of the web-based form. This made clear to participants that their identity was anonymous due to the secure nature of the web-based data collection and that if participants wished to leave contact information to receive the results or to participate in further interviews, I would ensure that this personal data was kept confidential and that it would not be reported.

There are several other significant ethical issues that were considered for this research including the location of interviews, collaboration with external organisations and potential issues for participants because of their workplace agreements. The location of interviews was carefully designed with ethical considerations in mind. Interviews were conducted in the location of choice of the participant and I specified that I would meet them at any mutually agreeable public location. This was done to ensure that the participants felt free to speak about their place of employment. It did create slightly more risk for me as I was meeting strangers in places of their choice, but the participants chose very well. Most of the interviews took place at coffee shops and cafes. While there is some risk of being

overheard in a public place, I ensured that the participant was satisfied with their choice of location after we arrived and allowed them to choose where we sat to speak. I remained vigilant to watch for any signs that the participant was uncomfortable speaking or felt intimidated by the location. One interview took place in the teacher's room at their school and three interviews took place at private residences. The interviews at private residences were due to extenuating circumstances, one was a couple near retirement who preferred to stay in at night and the other two were participants with very young children who preferred to stay at home. I was happy to oblige in those circumstances and judged that my safety was assured. For all the interviews, I ensured that at least one other person was informed about my whereabouts at all times and I left instructions about who should be contacted if I did not respond to messages after the interviews.

My research was conducted with significant help from associations with three international hiring organisations and the Sheikh Saud bin Saqr Al Qasimi Foundation for Policy Research. While each of these organisations assisted me in obtaining access to participants, I made it clear that my research was not connected with their aims and did not allow the organisations to have any input to my questions, methods or findings. I spoke with managers from each organisation ahead of time to clarify our expectations of each other. The international hiring organisations were enthusiastic to help with the research. They all felt that this piece of research fit well with their overall missions of assisting international teachers. The organisations did not ask input on any of the items or expect to influence the results at all. The Al Qasimi Foundation has the mission of increasing the amount of research that is conducted in the Middle East, especially about education and policy. As part of the collaboration, I was asked to present my initial findings at a public lecture at their headquarters. The

Al Qasimi Foundation was not involved with any decisions about how the research was conducted or the results of the research.

The most significant ethical consideration in this research was the potential conflict for teachers. Many of the teachers who I interviewed may have signed non-disclosure agreements or other contractual documents that were intended to restrict them from sharing their experiences or perceptions of their work. I have seen some of these documents and have signed them myself as an international school teacher. Some of these contracts forbid even former employees from speaking up against their former employer. At least one of the companies explicitly forbids their employees from disclosing information that could be harmful to the company. While it is legally unclear whether teachers speaking about their own experiences would classify as detrimental to business, precautions were taken to ensure that participants would not be harmed by their employer knowing they had participated in the research. I was very careful to anonymise my data to the point that both the participants and the education management organisations that employed them are unidentifiable. From previous discussions with teachers, I expected that participants would discuss a wide range of topics, even those that could possibly be seen to be in breach of their contracts. This occurred as I had predicted, and the teachers demonstrated different opinions about what could be considered breach of contract. In several cases, teachers disclosed *open secrets* or information that was supposed to be confidential, but that all of the teachers discussed anyway such as salary and benefits. I was careful that I did not push teachers to disclose information, but I also would not have been able to guess what was covered by their non-disclosure agreements. I did not stop any teacher from speaking at any point. Because part of the research is to uncover the unknown experiences of the teachers, I did not stop participants from making statements, but

instead, I ensured and will continue to ensure that their identities are concealed and their experiences known. As the level of analysis was the teacher and their experiences rather than school or company operations, no part of the research was conducted to uncover proprietary information.

In this research there was also some potential that teachers disclosed illegal operations by their employer. In several instances, teachers described what I would consider unethical behaviour by their colleagues or school administration. In many other cases, the teachers described events that were ethically or legally ambiguous (for example, schools allowing health insurance to lapse for employees), but no illegal behaviours were described that I would have been obliged to report. In anticipation of any legal issues, the interview participant debrief letter (Appendix F) included locally relevant information for teachers to report illegal behaviour to their country's labour ministry, education ministry or other education authority. Unfortunately, legally ambiguous or unethical behaviour is often outside of the mandate of these organisations and this effect of deregulation of education governance was mentioned in many interviews.

For this research, the ethical guidelines from the University of Nottingham were followed but required significant consideration and planning. The letter notifying ethics approval can be found in Appendix A.

Chapter 4: Findings and Discussion

This investigation aims to explore how teachers experience their work in marketised contexts with a particular focus on the patterns of their experiences. The approach was mixed-method scale construction to place teachers' own experiences and stories of their work at the centre. Although previous work has investigated teachers' experiences, this has either been done on too small a scale and seems idiosyncratic or has been conducted with an objectivist approach that does not include teachers' voices or stories. While previous research often considers the gendered nature of teaching, this is rarely included in the methods that are used to study teachers, especially when the study produces predominately quantitative results. This study is designed to remedy those weaknesses by using a feminist approach to quantitative methods to investigate teachers' experiences of work in marketised contexts.

This chapter describes the outcome of each of the four scales and the relationship between the scales. The chapter is organised based around each research question and the corresponding scale. Each section discusses the psychometric properties of each scale, the strengths and weaknesses according to related critical values, which items were included in each scale and how the items compare to the respondents. The idiosyncrasies of each scale are analysed with differential item function (DIF) to detect item bias based on several demographics that were collected with the data. The linear variable defined by the items is described along with a discussion of how the findings match previous literature about the theme or diverge from the literature. The findings are then discussed in connection with the original interview data, bringing the teachers' stories back into the analysis. For the final research question about the relationship between the scales, the linear regression,

multiple regression and path analysis results are presented. Then the results are discussed in relation to previous literature and related to the story of a teacher.

RQ1: Findings of the Teacher Experiences that Indicate Business Influences

As part of the overall question of how teachers experience their work in marketised contexts, a main theme was the influences of marketisation of their work. While the items designed to construct this scale were initially conceived as part of the marketisation theme, this set of items seem to demonstrate one part of marketisation: the indirect way that teachers experienced principles of business influencing their work. Therefore, the scale was titled Business Influences and the research question was written to understand the experiences of teachers related to the business influences on their work. The first research question and its sub-questions are:

1. What teacher experiences indicate the level of business influences on teachers?
    1a. What are the psychometric properties of this scale?
    1b. What idiosyncrasies of items and respondents were found for this scale?
    1c. What is the pattern of experiences of business influences?

To answer these questions, the results of the scale are presented to address sub-question A, the idiosyncrasies of the items are presented to respond to sub-question B and the main question is answered with the linear variable as described through the items. The accompanying analysis relates the scale back to teachers' stories of their experiences at work and the existing literature.

Psychometric properties of the scale. A final re-check with Mokken scale analysis found that most of the marketisation items scaled together with five of the Lack of Control items and five of the EduBusiness items. These further divided into a scale of primarily marketisation items, one of the EduBusiness items and another of a mix of lack of control items and marketisation items. The scale described here

included only marketisation items and was named the Business Influences scale. Thirteen items created a scale with a Loevinger's H-coefficient of 0.42 and a rho value of 0.89. The lowest performing item had a Loevinger's H-coefficient of 0.33. This was considered a moderately scalable set of items with good reliability and warranted further investigation with Rasch measurement.

Fit statistics and criteria. The final Rasch analysis of the scale was conducted using Winsteps (Linacre, 2017). The items were tested iteratively for fit, productive contribution to measurement, local independence and item bias through differential item functioning. Fit statistics indicate how the data fit the Rasch model. Infit and outfit statistics were used to identify problematic items using the criteria for rating scale survey items of 0.6 to 1.4. No items were excluded for high infit or outfit statistics. Five items (BI5, BI11, BI17, BI27 and BI29) were found to demonstrate Differential Item Functioning (DIF) and two items (BI11, BI29) were removed for DIF, the details of which are included later in this section. The DIF measures from BI5, BI17 and BI27 balanced out, so retaining them had little effect on the outcome measure. In the final analysis, 11 items and 177 persons were retained. The infit and outfit statistics were between 0.72 and 1.19 for all remaining items. Point-measure correlations of the items ranged from 0.58 to 0.78. The point-measure correlation indicates the correlation of the item to the overall score, demonstrating that all the items are contributing to the overall measure. The details of the point-measure correlations and infit and outfit statistics can be found in Table 11.

Person separation is used to classify people based on the items. This scale had a person separation of 2.64 where greater than 2.00 is considered good. Person reliability in Rasch analysis is generally equivalent to traditional test reliability and item separation indicates the strength of the item hierarchy (Linacre, 2000). This scale

had a person reliability of 0.87. When item separation is greater than 3.00, the person sample is likely large enough to confirm the difficulty ordering in the hierarchy of items. The item separation of this scale was 4.98 and the item reliability was 0.96. High item reliability means that the scale can be used to precisely locate the items on the latent variable in order. Item reliability of greater than 0.90 is considered good. The sample of items and persons both followed a normal distribution, so item and person separation were used to determine the strata. The items can be separated into four or five strata and the respondents can be separated into two or three strata of ability.

Yen's Q3 tests for local item dependency between pairs of items was used to find redundant items that did not aid in increasing the quality of the scale but may artificially increase the reliability. Local dependence may be present when the correlation between items is more than .70, indicating that the items share more than half of their random variance and only one of the items would be necessary for measurement (Linacre, n.d.-c). In this scale, the highest correlation was 0.35.

Distribution of sample on the linear variable. The comparison of people versus items can be seen in the Wright Map (also known as the Person-Item Map) in Figure 5.

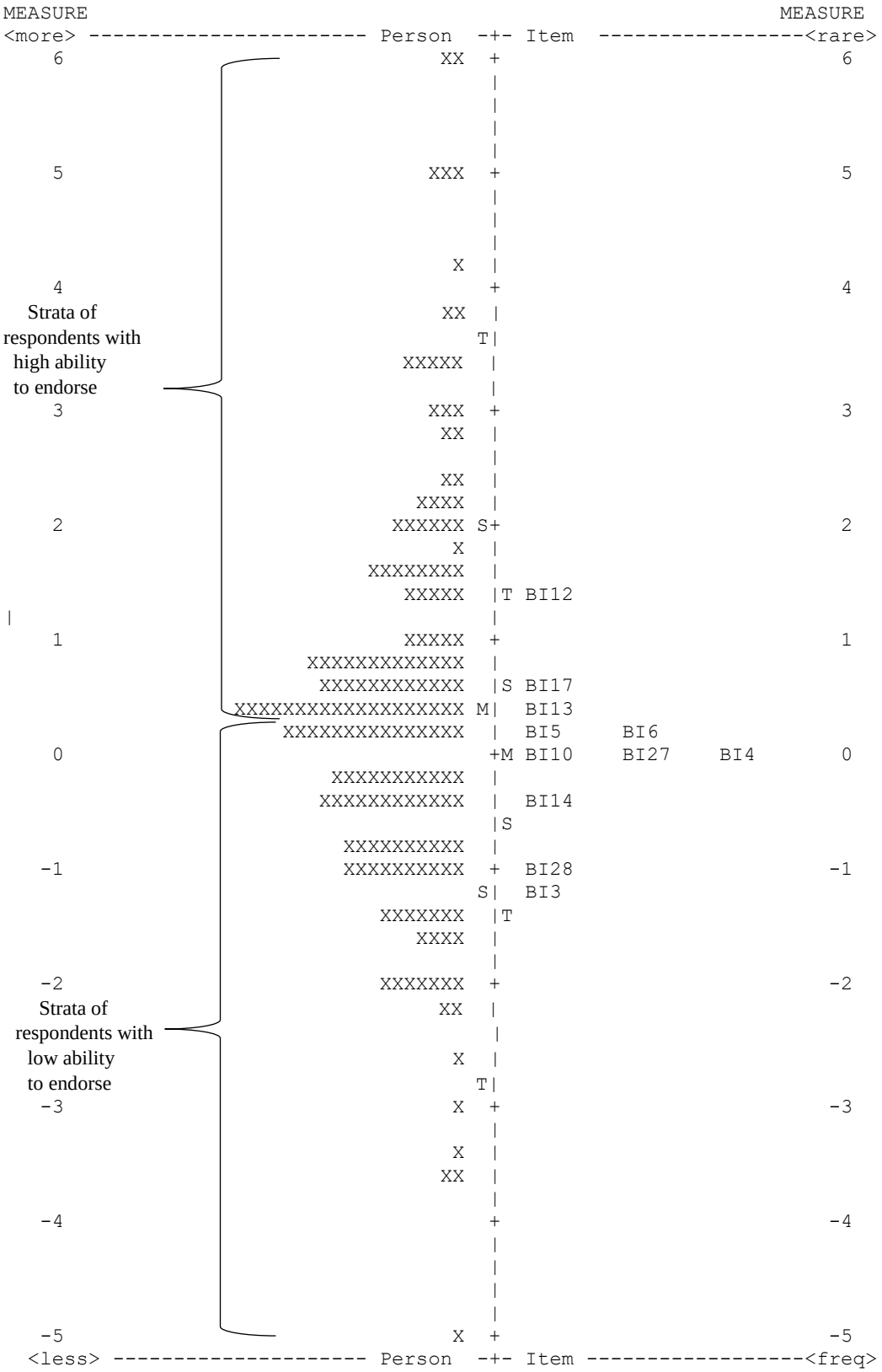


Figure 5. Wright map for the Business Influences scale. Each X=one person.

Figure 5 demonstrates that the items of the Business Influences scale had a range of difficulty spread over the range of respondents and that the respondents were spread over the range of the scale in a fairly normal distribution. The mean of the person measures and the mean of the items were close but not aligned. While the items are somewhat bunched in the middle of the scale, the four response categories meant that respondents were able to demonstrate a range of experiences.

Functioning of rating scale and categories. The rating scale performed well with four response categories with Andrich thresholds of -3.03, 0.45, 2.57. None of the items had disordered thresholds where the average ability of respondents to endorse items was out of order by response category. Figure 6 shows the category probabilities and Andrich thresholds at the intersections.

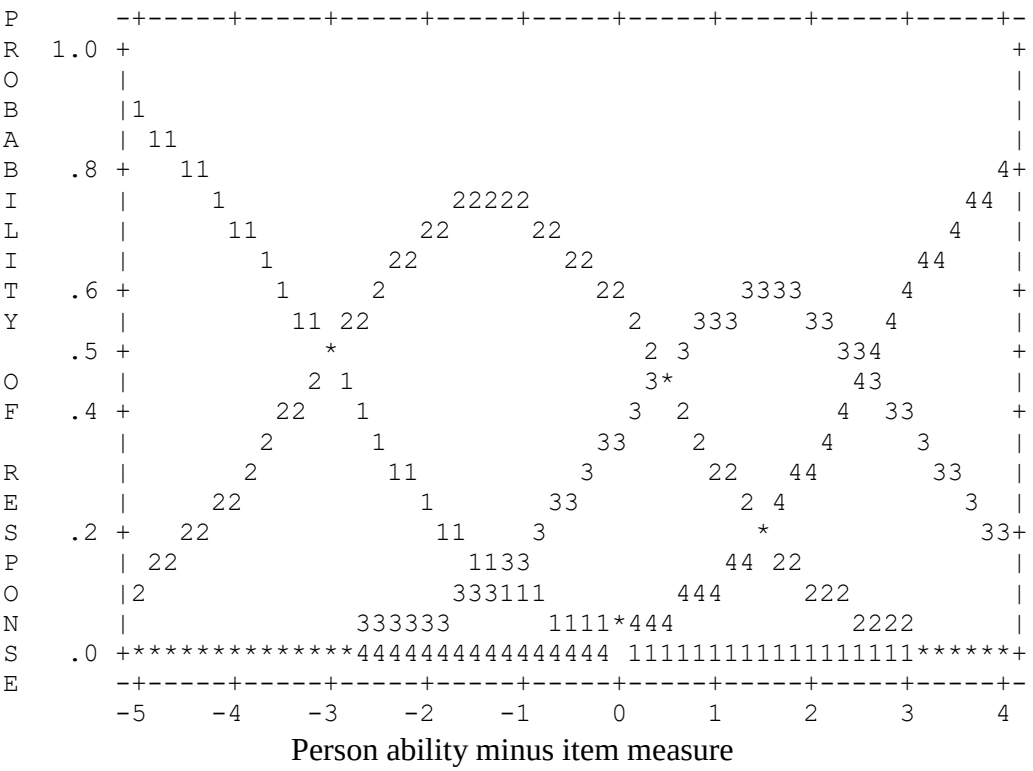


Figure 6. Response category probabilities and Andrich thresholds for the Business Influences scale.

The construct key map in Figure 7 demonstrates the functioning of the rating scale across the items as a group and shows the distribution of the respondents along

the scale. The Business Influences scale items covered a range of experiences with good variation in the difficulty of the items, no disordered thresholds for any of the items and four item strata.

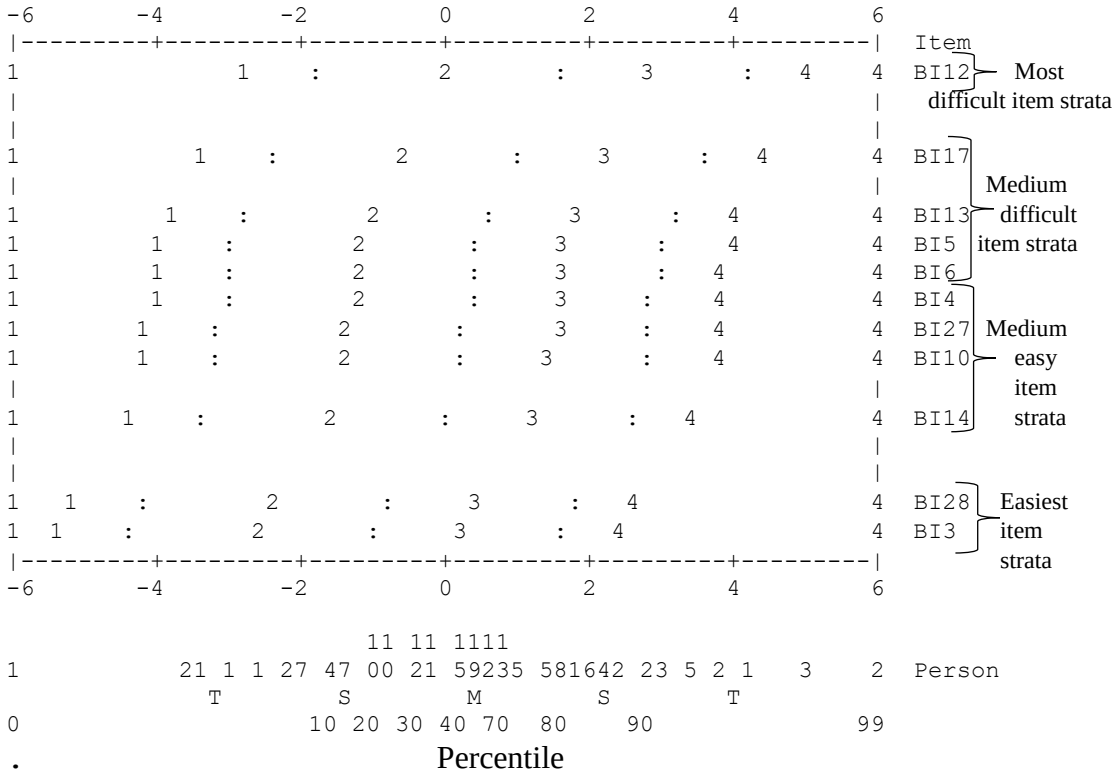


Figure 7. Construct key map for the Business Influences scale.

Table 7 demonstrates that overall, the rating scale with four categories performed well. Each category had acceptable infit and outfit mean square values and the Andrich Thresholds were different by at least 1.50 with acceptable standard error for each step. All four categories garnered responses for each item of the scale.

Table 7

Summary of the Business Influences scale category functioning

Category Label	Observed Count	Infit MnSq	Outfit MnSq	Andrich Threshold	Step Standard Error
1 (Strongly Disagree)	141	0.97	0.96	-3.03	0.10
2 (Disagree)	844	1.04	1.04	0.45	0.06
3 (Agree)	663	1.03	1.01	2.57	0.08
4 (Strongly Agree)	299	0.94	0.94		

Investigating secondary dimensions. The raw variance explained by measures was 50.3% compared to 50.3% modelled with 29.4% explained by persons and 20.9% explained by items. In an analysis of the unexplained variance, the first contrast of unexplained variance was 9.9% of the variance with an eigenvalue of 2.18. The remaining contrasts were smaller and none of the eigenvalues were over 3, suggesting that the data is likely unidimensional.

Idiosyncrasies of items and persons. The Business Influences scale had some idiosyncrasies of items and some misfit of respondents. Many items were included in the scale initially but excluded from the final analysis due to differential item functioning (DIF). While they measure the same latent variable as the rest of the items, items demonstrating DIF may change the nature of the measurement. DIF analysis is used to find items that measure differently across respondents of similar ability but in different groups and is commonly referred to as item bias. When it is found in the initial analysis of a scale, those items should be removed (Tennant & Pallant, 2007). Linacre (n.d.-a) suggests that DIF may be inherent when looking at certain attributes. In that case, the researcher can attempt to balance DIF across groups. DIF was tested comparing gender groups, comparing government/public school or private school, non-profit or for-profit school, comparing respondents who were national or international teachers, and teachers who were early

childhood/primary or secondary teachers. In this scale, DIF was detected as affecting five items.

DIF for international teaching status. Respondents were asked to identify if they were working in the same country as their national origin or not. They were then categorised as being international or national teachers in the analysis. DIF by international teaching status was found to affect one item.

Table 8

DIF for international teaching status for the Business Influences scale

Item	Item Text	DIF Contrast	Outcome
BI11	There is a social divide between teaching assistants, teachers, and administrators	-0.85, p<.05	Easier for international teachers

DIF for school type. Respondents were asked to categorise their school as a government/public or private school. DIF by school type was found to affect four items. Items BI5 and BI17 were retained in the analysis, balancing each other out for private and public schools.

Table 9

DIF for school type for the Business Influences scale

Item	Item Text	DIF Contrast	Outcome
BI5	Administrators in the school act more like business managers than pedagogical leaders	-0.76, p<.01	Easier for private school teachers
BI11	There is a social divide between teaching assistants, teachers, and administrators	-0.68, p<.05	Easier for private school teachers
BI17	I am required to spend too many hours per week at school	0.65, p<.05	Easier for public school teachers
BI29	Proving that learning has occurred sometimes takes away from actual learning	0.60, p<.01	Easier for public school teachers

DIF for profit status. Respondents were asked to report the non-profit or for-profit status of their school. Public and government schools were included as "non-profit". DIF by profit status was found to affect two items. While these two items

demonstrated DIF, as they were retained to balance each other out so that the DIF had little effect on the overall measure.

Table 10

DIF for profit status for the Business Influences scale

Item	Item Text	DIF Contrast	Outcome
BI17	I am required to spend too many hours per week at school	-0.59, p<.05	Easier for non-profit school teachers
BI27	The school administration makes promises to parents that the staff cannot deliver	0.74, p<.05	Easier for for-profit school teachers

DIF for gender and level. In the comparison across groups, there was no DIF found for gender or level.

Idiosyncrasies of persons. Some person misfit was found in this scale. Twenty-seven respondents were excluded from the scale for indicating high amounts of misfit as measured by mean-square infit and outfit values over 2. Twenty-seven respondents excluded from the scale is 13% of the total respondents, the demographics of which can be seen in Table 33.

Pattern of experiences of Business Influences. The experiences that indicate the level of business influences on teachers can be described by the Business Influences scale items. Due to the nature of the analysis, the variable can be broken into five or six strata of difficulty of items from most common to least common. Figure 8 demonstrates the item hierarchy with items separated into four strata and ordered by difficulty.

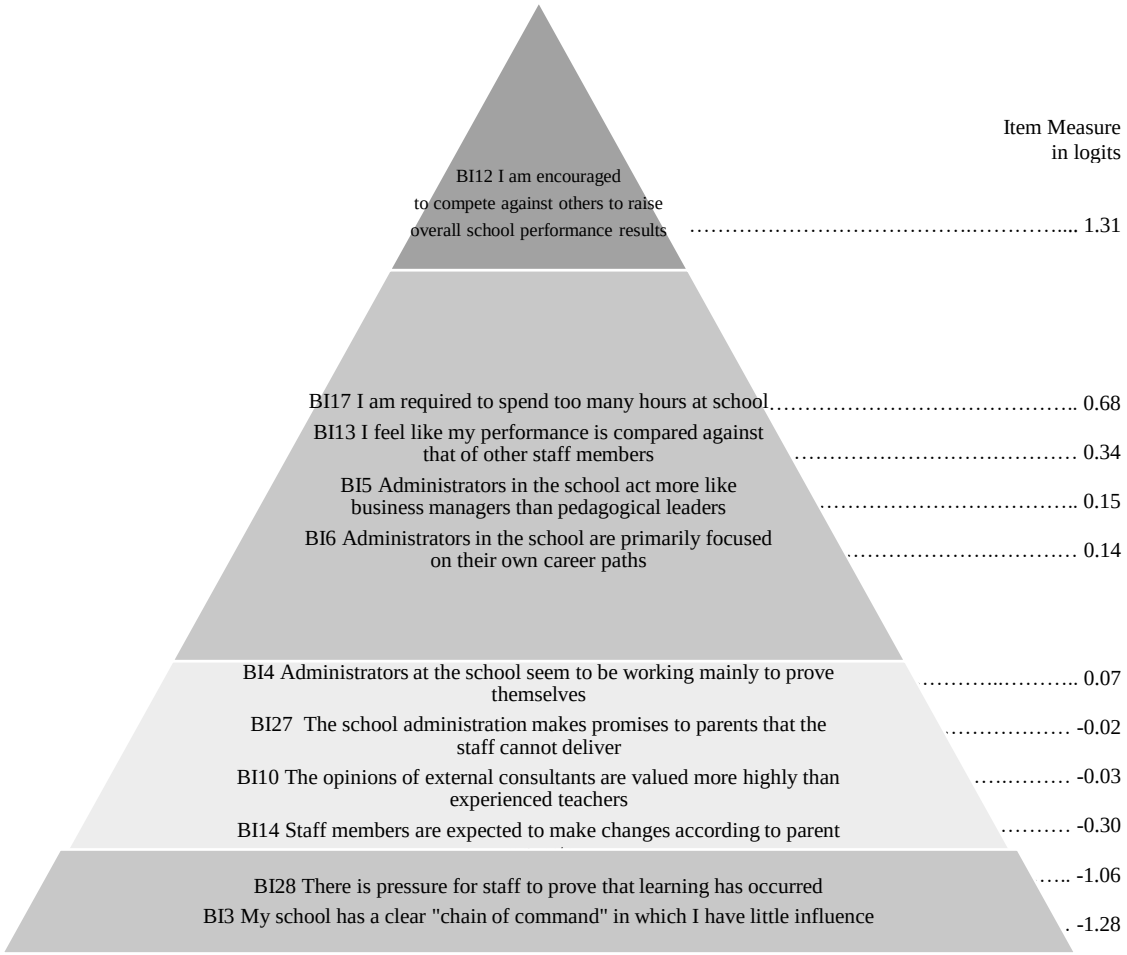


Figure 8. Item hierarchy for the Business Influences scale.

Table 11

Item quality statistics for the Business Influences scale

Item Number	Measure	S.E.	Infit MnSq	Outfit MnSq	Pt-measure corr
BI12	1.31	.14	1.04	1.00	.69
BI17	0.68	.13	1.19	1.24	.60
BI13	0.34	.13	1.17	1.14	.65
BI5	0.15	.13	0.96	0.94	.75
BI6	0.14	.13	0.77	0.79	.77
BI4	0.07	.13	0.72	0.70	.78
BI27	-0.02	.13	0.98	0.94	.74
BI10	-0.03	.13	1.01	0.99	.66
BI14	-0.30	.13	0.89	0.91	.72
BI28	-1.06	.13	1.06	1.02	.63
BI3	-1.28	.13	1.19	1.23	.58

Analysis of the pattern of the Business Influences scale and previous findings. The Business Influences Scale demonstrates a pattern of marketisation related to indirect influences of business on teachers. The most common items were about the chain of command and the pressure to prove learning had occurred. The items of the scale fit three main themes: market actors, performativity and inequality

Market actors. The scale demonstrates a relationship between different ways that parents, teachers and administrators in schools behave as "market actors" (Marginson, 1999, p. 235). The pattern of teachers feeling pressure to prove learning has occurred, parent requests leading to changes in the schools, administrators making undeliverable promises to parents, and administrators' focus on their careers and business management over and above pedagogical leadership demonstrate how different stakeholders in education are acting according to market principles to maintain their influence in the system. Relating to previous research, these findings describe the ways that schools take on "behaviours typical of corporations operating in an economic market" (Marginson, 1999, p. 229). The scale describes an approach of school workers that seems characteristic of desire to provide a service to retain customers or the fear of lost revenue. It also describes the connection between administrators taking on a more business-like approach to school management and acting as if they were working up career ladder more characteristic of a commercial organisation. The construction of a scale demonstrates that this is not idiosyncratic, but part of a larger pattern of business influences within schools. Marginson (1999) describes how the policy discourse is focused on educational improvement through "more intense competition, more professionalised management, tighter accountability of measured outputs, greater efficiency pressures, and so on" (pp. 236-237). This is evident in the business influences scale that these are not simply different aspects of

education that coincidentally occurred together, but that they come as related aspects of market influences infiltrating the daily experiences of teachers.

Performativity. In conjunction with school workers behaving as market actors, teachers described feelings of being in competition to raise overall school results, feelings of being compared against other staff members, and pressure to prove learning has occurred. This pattern of items is similar to what Ball (2003) describes as "performativity" demonstrating the connection found in previous literature of accountability, market influences and the effect on teachers as "new roles and subjectivities are produced as teachers are re-worked as producers/providers, educational entrepreneurs and managers and are subject to regular appraisal and review and performance comparisons" (Ball, 2003, p. 218). These findings also fit with Gewirtz's (2003) discussion of managerial schools and the effects on teachers. She describes the competitive environment, consumer-oriented ethos, focus on individual teachers' results, authoritarian leadership style and school leaders socialised with values of management rather than education (p. 32). The leadership style connects to the third theme of this scale, inequality.

Inequality. This scale connects market actor behaviours and elements of performativity along with teachers' feelings of having little influence in the chain of command, the opinions of external consultants being trusted over teachers, and teachers spending too many hours at work. These items demonstrate workers' feelings of inequality within a school. With leaders focused on their own careers, teachers working long hours with little influence, an exclusive chain of command and elements of performativity, this scale fits previous findings of the labour process of teachers' work (Carter & Stevenson, 2012; Ozga & Lawn, 1988; Reid, 2003; Tipton, 1988). In this scale, evidence of the labour process is seen in the large number of hours teachers

work, but the low status teachers feel in the chain of command and the accompanying feelings that their work performance is judged and compared. The scale also demonstrated a relationship with believing the expertise of outside consultants over experienced teachers within the school. This was previously investigated by Griffiths (2006) and Duckworth et al (2016) who described the gendered structures of schools and how that relates to the influence that teachers feel they have in a school.

These findings do refute some of the claims made by Heller-Sahlgren (2014) about the methodological issues and implications for privatisation of schools. Heller-Sahlgren (2014) describes how, due to the extreme variation in how schools are privatised, it is unfair to judge all privatisation on poorly implemented privatisation stating, "poorly designed privatisations cannot be expected to yield strongly positive outcomes" (p. 197). Marketisation is ignored as the cause of problems and the blame is laid with the people in charge, the location of the school or other factors. While this may be one possible analysis, it disregards the relationship between how a school is operated and the behaviour that workers need to succeed in that system. Assuming that problems are idiosyncratic because of variation, but successes are systemic even when varied, is an ideological oversimplification. Heller-Sahlgren (2014) calls for a system with more competition, less regulation and increased responsiveness to parent requests claiming that "it is clear, however, that there is very little evidence of any *negative* effects of privatisation" (p. 205). While Heller-Sahlgren (2014) advocates for a system driven by marketisation to improve results, it is assumed that negative consequences of these changes must be unrelated. The findings of this scale demonstrate that marketisation should not be seen as separate from how teachers experience their work. The influences of marketisation on teachers' work significantly impact what happens in the education process. This scale demonstrates that the

pattern of increasing these aspects of schools is also related to teachers having little influence, administration making promises they cannot deliver and teachers spending too many hours at school. Even before analysing the relationship to other scales, this scale alone demonstrates the direct relationship of Heller-Sahlgren's ideals to negative consequences for teachers. This research shows that there are negative behaviours and negative effects for teachers related to a more business-oriented approach to school. In other existing literature, marketisation is assumed to improve schools through competition (Chubb and Moe, 1990), lead to higher quality due to student choice (Friedman, 1997) and recognise teachers with special skills (Hoxby, 2002). In this literature, market forces are thought to cause schools to enact changes that improve the quality of education. Rarely are the mechanisms of this change discussed but marketisation is presumed to have a positive effect that obviously outweighs teacher turnover, student mobility or teachers' intensified work. This scale seems to demonstrate that marketisation has accompanying practices that affect teachers and their work.

The pattern of Business Influences in a teacher's story. An example of this pattern was illustrated in the interviews. Claire (Participant 18-C-UK) told stories that elaborated the connections between these items. Claire described her years of work at Company C moving from a part-time position through to head of department. She is a white, American teacher working in England. Her stories demonstrate some of the pattern of the business influences scale.

Claire's stories illustrate the connection between proof of learning, parental involvement in schools and low levels of teacher influence. She described her own role in creating proof that learning was occurring. Claire said that her department was strong but lacked consistency in assessment because "teachers have been sort of left to

their own devices". Her main responsibility as a head of department was designing ways to ensure that the teachers were backing up their marking judgments with quality information according to her standard. Changes according to parent requests were evident in her experience at the school. Claire felt that parent complaints "go straight to the top" and that parents had a sense that "we [the teachers] work for them". She felt like parents did not respect the chain of command to speak first to the teacher if they were concerned and instead went immediately to the head of school. Claire described a situation at the school where teachers' voices had some influence, but she noted that the influence varied considerably over the course of several years. She had volunteered to be the teacher representative on the school's governing board. Over several years, the position changed, disappeared and reappeared. The position disappeared just before the school changed ownership, reappeared when the new owners took over with the hope of increasing communication with the teaching staff, but had disappeared again that year. Claire had mixed feelings about seeing the position disappear. It meant that the governing board did not hear the views of teachers, but she was relieved because she had felt significant pressure in the position. Rather than being a representative, she felt the governing board interpreted her contributions as her own personal complaints. This led to her feeling discomfort in the position which she described as feelings of "my head on the block".

Claire's stories also demonstrated the connection between business-oriented school leadership and feelings of competition between teachers. She told stories that illustrated ways that her administration acted more as business managers more than pedagogical leaders and worked on their own career paths. Claire described her principal as "on a career track." While the principal taught in the department she led, he was resistant to being observed or managed by her, maintaining his dominance

over his class and resisting some of the regulations put on other teachers. The principal and head of school both left mid-year and her perception was that they were both primarily concerned with their own careers rather than students' needs.

Claire also told stories demonstrating how teachers were compared against each other. The company had implemented a merit pay system which she felt significantly influenced how teachers behaved in the school. While the company had told all the teachers there was enough money for everyone to be paid the highest wage, she said only a few people were recognised at the highest level. Claire said this led to "a lot of feeling of competition, a lot of resentment" among the teachers. She felt that teachers who wanted the higher rate of pay could not simply be excellent in their work but had to make their effort and achievement visible. She described how she observed teachers attending events to ensure they were seen by administrators as going above and beyond. Claire said "people wanted to be seen doing things that would prove their merit" but that she had decided not to participate in the competition for compensation. She said that eventually most of the teachers accepted that they would earn on the lower side of the scale. Another form of competition and comparison she described was a rift between the staff members who had been hired by the previous head of school and those who had been hired by the current head of school. She felt that the previous administration had focused on recruiting "Oxbridge" trained teachers who had graduated from famous prep schools in the UK while the new staff members were more varied and international. She felt like the administration had set the old staff at odds with the new staff. While Claire's stories did not address every item on the item hierarchy, her experiences seem to elaborate the pattern of significant business influences on her work.

RQ2: Findings of the Teacher Experiences that Indicate an EduBusiness

As part of the overall question of how teachers experience their work, a main theme was the influences on them due to the marketisation of their work. Along with the items in the Business Influences scale, these items were initially part of the marketisation theme. Different from the Business Influences scale, these items demonstrate a pattern of the direct interaction of business in teachers' work that would be associated with an *EduBusiness*, a school run as a private enterprise. The scale was titled EduBusiness and the research question was written to understand the experiences of teachers related to the extent to which their school was run like an EduBusiness. The second question and its sub-questions are:

2. What teacher experiences indicate how running a school like an EduBusiness is evident in teachers' work?
    2a. What are the psychometric properties of this scale?
    2b. What idiosyncrasies of items and respondents were found for this scale?
    2c. What is the pattern of experiences of an EduBusiness?

To answer these questions, the results of the scale are presented to address sub-question A, the idiosyncrasies of the items are presented to respond to sub-question B and the main question is answered with the linear variable as described through the items. The accompanying analysis relates the scale back to teachers' stories of their experiences at work and the existing literature.

Psychometric properties of the EduBusiness Scale. A final re-check with Mokken scale analysis found that five of the EduBusiness items scaled together with five of the Lack of Control items and twenty-seven of the Marketisation items. When the eight items theorised as EduBusiness were tested on their own in Mokken scale analysis, they were found to create a moderate scale with a Loevinger's H-coefficient of 0.53 and a rho value of 0.88. The scale of eight items was found to have a

Loevinger's H-coefficient of 0.53 and a rho value of 0.88. This was considered a strongly scalable set of items with good reliability and warranted further investigation with Rasch measurement.

Fit statistics and criteria. The final Rasch analysis of the scale was conducted using Winsteps (Linacre, 2017). The items were tested iteratively for fit, productive contribution to measurement, local independence and item bias through differential item functioning. Fit statistics indicate how the data fit the Rasch model. Infit and outfit statistics were used to identify problematic items using the criteria for rating scale survey items of 0.6 to 1.4. No items had to be excluded for high infit or outfit statistics. One item (EB5) was removed for Differential Item Functioning (DIF) and three items were retained that demonstrated DIF, the details of which are in the next section. In the final analysis, seven items and 176 persons were retained. The infit and outfit statistics were between 0.81 and 1.22 for all remaining items. Point-measure correlations of the items ranged from 0.71 to 0.81. The point-measure correlation indicates the correlation of the item to the overall score demonstrating that all the items are contributing to the overall measure. Details of the point-measure correlations and infit and outfit statistics can be found in Table 16. Person separation is used to classify people based on the items. This scale had a person separation of 2.48 where greater than 2.00 is considered good. Person reliability in Rasch analysis is generally equivalent to traditional test reliability and item separation indicates the strength of the item hierarchy (Linacre, 2000). This scale had a person reliability of 0.86. When item separation is greater than 3.00, it is good is evidence for validity that the person sample is large enough to confirm the difficulty ordering in the hierarchy of items. The item separation of this scale was 7.26 and the item reliability was 0.98. High item reliability means that the scale can be used to precisely locate the items on

the latent variable in order and reliability of greater than 0.90 is considered good. The sample of items and persons both followed a normal distribution, so item and person separation were used to determine the strata. The items can be separated into seven strata and the respondents can be separated into three strata of ability.

Yen's Q3 tests for local item dependency between pairs of items was used to find redundant items that did not aid in increasing the quality of the scale but may artificially increase the reliability. Local dependence may be present when the correlation between items is more than 0.70, indicating that the items share more than half of their random variance and only one of the items would be necessary for measurement (Linacre, n.d.-c). In this scale, the highest correlation was 0.44.

Distribution of sample on the linear variable. The comparison of people versus items can be seen in the Wright Map in Figure 9.

Figure 9 demonstrates that the items of the EduBusiness scale had a range of difficulty spread over the range of respondents and that the respondents were spread over the range of the scale. The distribution of respondents against the items is not exactly a normal distribution which may indicate that this scale needed more items. The mean of the person measures and the mean of the items were close but not aligned. The items are nicely distributed across the range of difficulty, but many respondents were not targeted by the items. The grouping of many respondents at the very top of the Wright map is evidence that the scale did not discriminate well at the highest abilities. Another item or two of lower difficulty and several additional items of higher difficulty would have improved this scale and perhaps led to a more normal distribution of respondents.

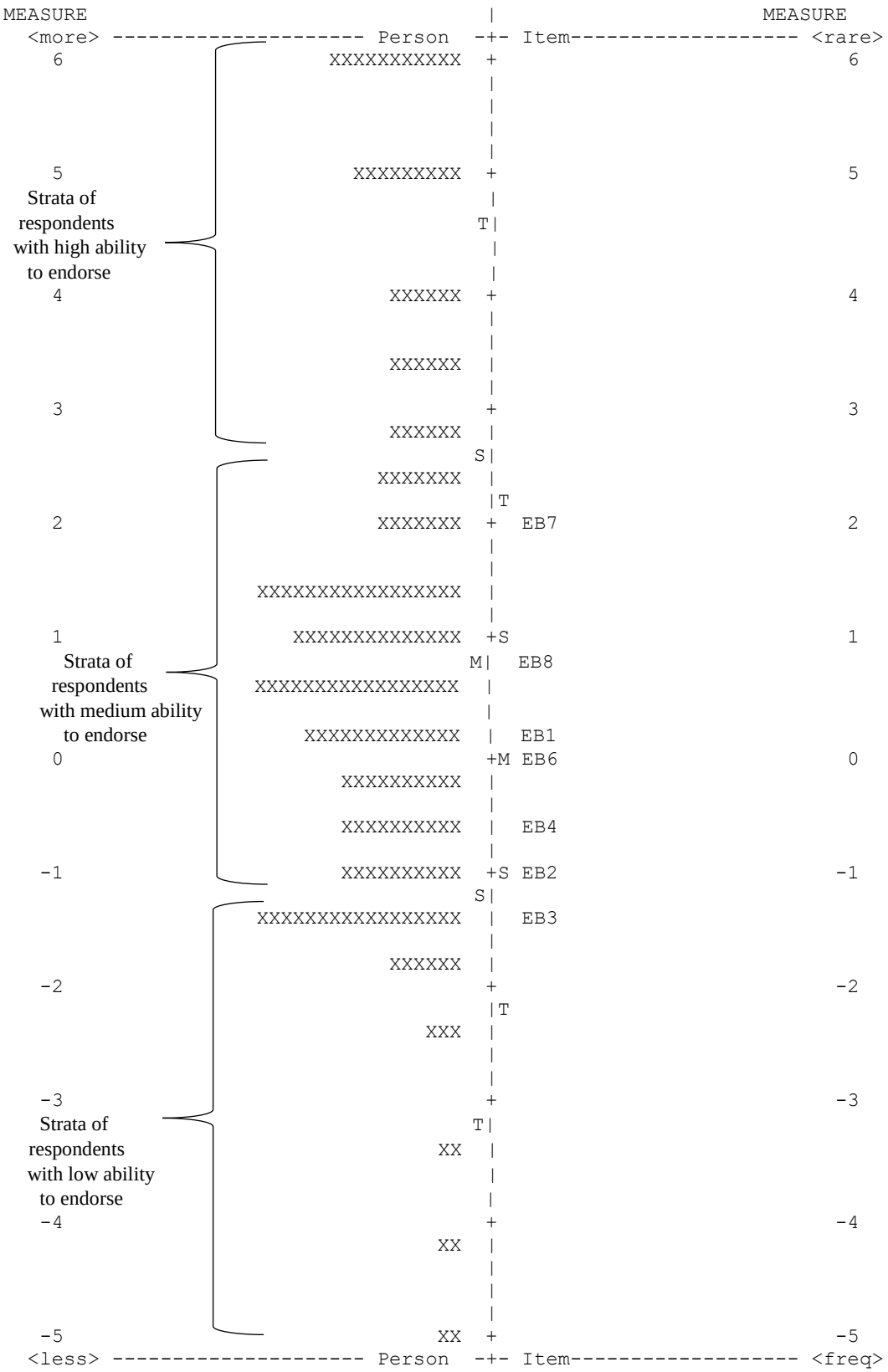


Figure 9. Wright map for EduBusiness scale. Each X=one person.

Functioning of rating scale and categories. The rating scale performed well with four response categories with Andrich thresholds of -3.08, 0.21, 2.86. None of the items had disordered thresholds where the average ability of respondents to endorse items was out of order by response category. Figure 10 shows the category probabilities and Andrich thresholds at the intersections.

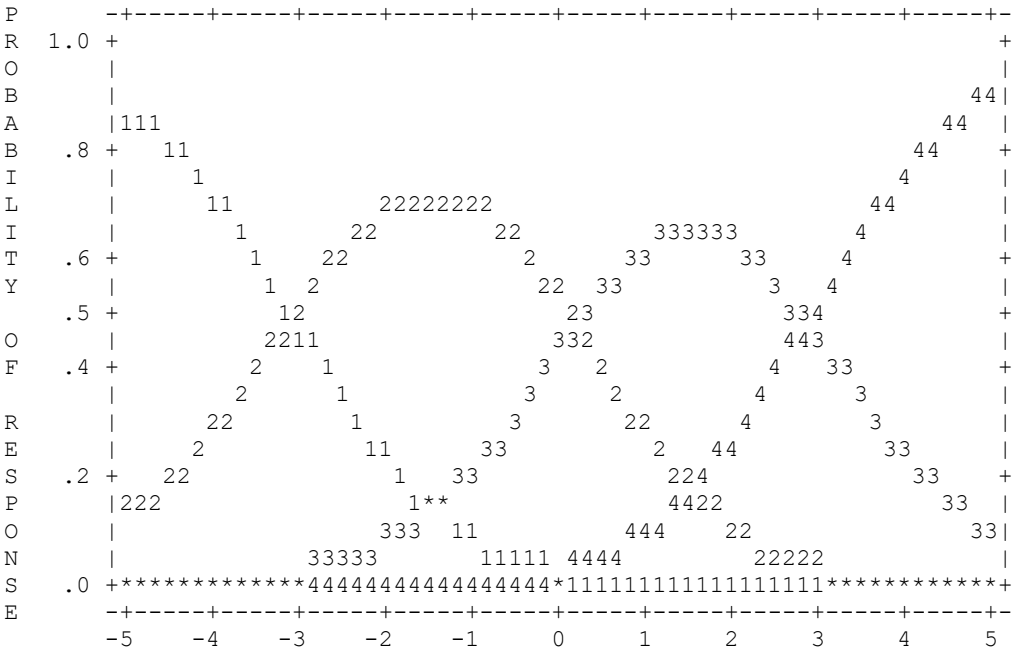


Figure 10. Response category probabilities and Andrich thresholds for the EduBusiness scale.

The construct key map in Figure 11 demonstrates the functioning of the rating scale across the items as a group and shows the distribution of the respondents along the scale. The EduBusiness scale items covered a range of experiences with good variation in the difficulty of the items, no disordered thresholds for any of the items and seven item strata. The large space between items EB7 and EB8 demonstrates that this scale would have benefitted from another item in that range of difficulty.

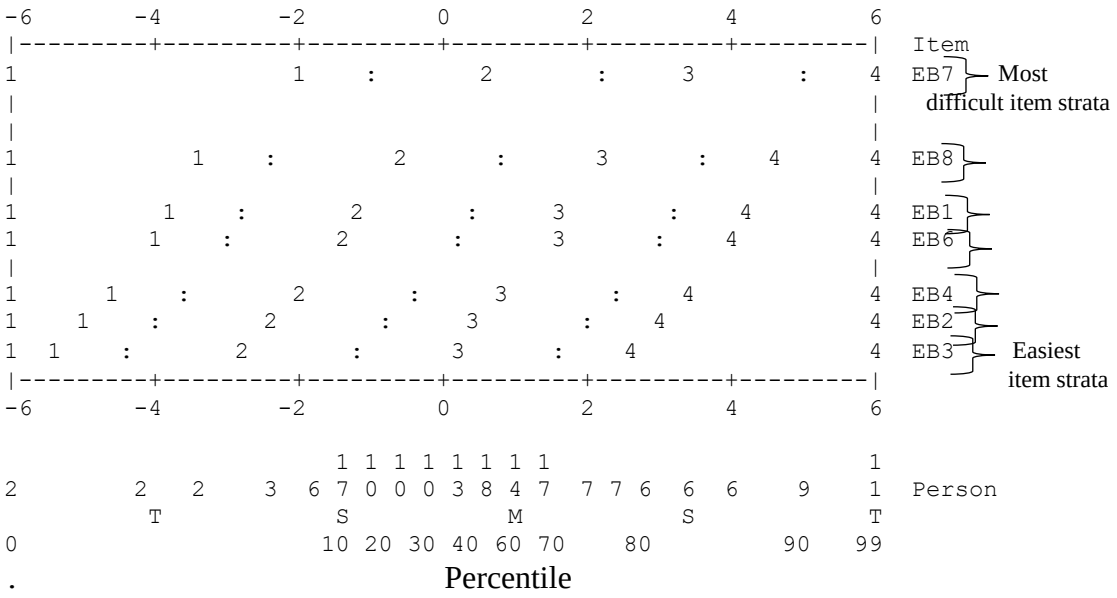


Figure 11. Construct key map for the EduBusiness scale.

Table 12

Summary of the EduBusiness scale category functioning

Category Label	Observed Count	Infit MnSq	Outfit MnSq	Andrich Threshold	Step Standard Error
1 (Strongly Disagree)	108	0.97	0.97		
				-2.94	0.13
2 (Disagree)	384	1.14	1.11		
				0.18	0.08
3 (Agree)	423	0.96	0.89		
				2.76	0.10
4 (Strongly Agree)	317	0.92	0.93		

Table 12 demonstrates that overall, the rating scale with four categories performed well. Each category had acceptable infit and outfit mean square values and the Andrich Thresholds were different by at least 1.50 with acceptable standard error for each step. All four categories garnered responses for each item of the scale.

Investigating secondary dimensions. The raw variance explained by measures was 60.7% compared to 60.9% modelled with 35.6% explained by persons and 25.0% explained by items. In an analysis of the unexplained variance, the first contrast of unexplained variance was 10.7% of the variance with an eigenvalue of 1.90. The remaining contrasts were smaller and none of the eigenvalues were over 3, suggesting that the data is likely unidimensional.

Idiosyncrasies of items and persons. The EduBusiness scale had many idiosyncrasies of items and some misfit related to the respondents. Many items were included in the scale initially but excluded from the final analysis due to differential item functioning (DIF). DIF analysis is used to find items that measure differently across respondents of similar ability but in different groups and is commonly referred to as item bias. When it is found in the initial analysis of a scale, those items should be removed (Tennant & Pallant, 2007). DIF was tested comparing gender groups, comparing government/public school or private school, non-profit or for-profit school, comparing respondents who were national or international teachers, and teachers who were early childhood/primary or secondary teachers. In this scale, DIF was detected as affecting four items.

DIF for school type. Respondents were asked to categorise their school as a government/public or private school. DIF by school type was found to affect three items.

Table 13

DIF for school type for the EduBusiness scale

Item	Item text	DIF Contrast	Outcome
EB5	Spaces in my school are turned into classrooms to increase capacity	0.78, $p<.05$	Easier for public school teachers
EB6	My school uses advertisement to increase enrolment	-0.53, $p<.05$	Easier for private school teachers
EB8	My school is run on a business model	-0.55, $p<.05$	Easier for private school teachers

DIF for profit status. Respondents were asked to report the non-profit or for-profit status of their school. Public and government schools were included as "non-profit". DIF by profit status was found to affect two items.

Table 14

DIF for profit status for the EduBusiness scale

Item	Item Text	DIF Contrast	Outcome
EB1	Earnings from the school benefit the school's managing group	1.13, p<.01	Easier for for-profit school teachers
EB8	My school is run on a business model	0.95, p<.05	Easier for for-profit school teachers

DIF for level. Respondents were asked to report what level of school they taught. Respondents were given multiple response categories but the responses were re-coded into early childhood/primary school teachers, secondary school teachers and Other. For the DIF analysis, Early childhood/Primary teachers were compared against secondary school teachers only. DIF by level taught was found to affect one item.

Table 15

DIF for level for the EduBusiness scale

Item	Item Text	DIF Contrast	Outcome
EB8	My school is run on a business model	0.68, p<.05	Easier for secondary teachers

DIF for gender and international teaching status. In the comparison across groups, there was no DIF found for gender or international teaching status.

While three items (EB1, EB6 and EB8) demonstrated significant DIF in the analysis, they were retained for the final scale. While the items do not measure without bias, those items would not be expected to measure equally across teachers working in different types of schools. In this case, the DIF was inherent in the measurement system and the scale still produces accurate, although potentially less precise, measurements for each person (Linacre, n.d.-a).

Idiosyncrasies of persons. Significant amounts of person misfit were found in this scale. Twenty-eight respondents were excluded from the scale for indicating high amounts of misfit as measured by mean-square infit and outfit values over 2. While

28 respondents excluded from the scale is 14% of the total respondents, they do seem to be a fairly random selection of the respondents overall. When looking at the demographic data, the respondents who were excluded seem to have a similar distribution to all the respondents for age, years as a teacher, school size, and the five demographics used for DIF analysis which can be seen in Table 33.

Pattern of experiences of an EduBusiness. The experiences that indicate how running a school like a business is evident in teachers' work can be described by the EduBusiness scale items. Due to the nature of the analysis, the variable can be broken up into three levels of difficulty of items from most common to least common. Figure 12 demonstrates the item hierarchy with items separated into seven strata and ordered by difficulty.

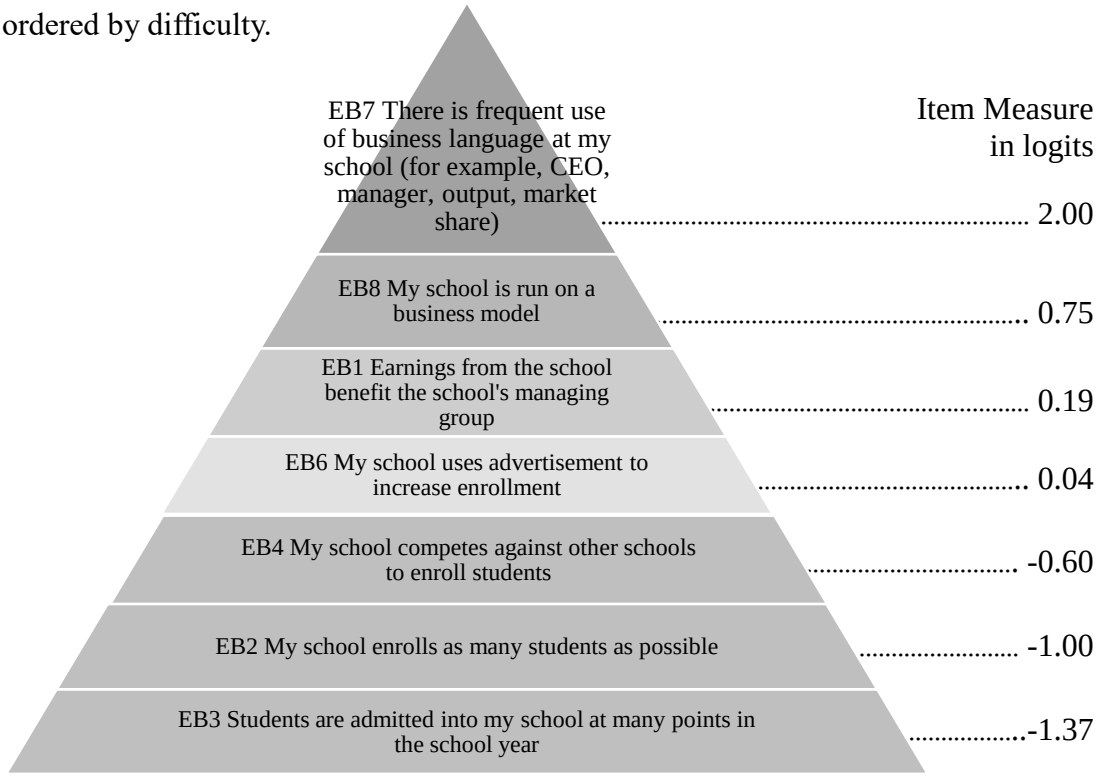


Figure 12. Item hierarchy for EduBusiness scale

Table 16

Item quality statistics for the EduBusiness scale

Item Number	Measure	S.E.	Infit MnSq	Outfit MnSq	Pt-measure corr
EB7	2.00	.14	1.22	1.15	.76
EB8	0.75	.14	0.88	0.87	.83
EB1	0.19	.14	1.08	1.12	.79
EB6	0.04	.14	0.99	1.00	.78
EB4	-0.60	.14	0.81	0.77	.81
EB2	-1.00	.14	1.00	0.92	.75
EB3	-1.37	.14	1.05	1.00	.71

A particularly interesting part of the EduBusiness scale is the comparison of the EduBusiness measure of each individual teacher against the stated school type. Respondents were asked a series of questions about the nature of their school. The comparison can be seen in Figure 13. After completing the questionnaire, several respondents noted that their school may be technically labelled as one of the categories, but that the category did not match the reality of the school. While all the teachers working in medium and large for-profit schools were measured in the middle to high range on the scale, a few of the teachers in small for-profit schools had measures very low on the scale, indicating that their schools were not particularly business-oriented. However, many teachers working in private non-profit schools reported their schools being run significantly like an EduBusiness. A few of the teachers in government, public or state schools also measured on the far end of the scale.

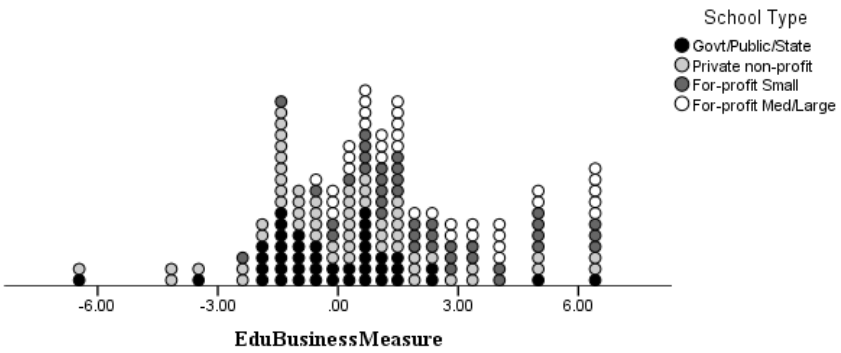


Figure 13. Comparison of EduBusiness Measure with reported School Type

Analysis of the pattern of the EduBusiness scale. The EduBusiness Scale demonstrates a connection between admissions, competitive enrolment, and the use of advertising. The school being run on a business model was related to earnings from the school benefiting the managing group, and the use of business language in the school. While the items at the easy-to-endorse end of the scale could be characteristics of public schools, the scale gradually incorporates business-like marketing, profit, and a business model for the school.

Relating to previous literature about how schools behave as businesses, the EduBusiness scale fits with significant literature about the topic. The shift in language has been noted by Larner (2000) as she describes a change from talking about the *public* to *consumer* in education. Aurini (2006) argues that the business language is often used to promote the legitimacy of an organisation. In the case of this research, the business language seems potentially adopted alongside being run as a business to bring together different types of legitimacy from both the education and business sectors. It is interesting that, in this research, it was more difficult for teachers to endorse the items about the use of business language than it was for them to endorse the items about their school as being run as a business or with funds benefiting the managing group. This means that a school could be run as an EduBusiness, with earnings benefiting the school's managing group, but still retain the language of a school. Pache and Santos (2010) describe the interest that for-profit organisations have in appearing like public schools stating that "organisations with a commercial imprint chose to compensate their initial legitimacy deficit by displaying a very high level of compliance with social welfare demands. In doing so, they attempted to demonstrate, in practice, the sincerity of their social intentions" (Pache & Santos, 2010, p. 30). While a school may be run like a business, it may retain the language of

social welfare even while operating like a service for consumers. The importance of language has been noted by Elliot (2011) that the "'social market' perspective generates a whole new language for talking about education: … 'efficiency' and 'effectiveness' rather than 'educational values'; 'performance indicators' rather than 'evidence'; 'quality control' rather than 'evaluation'; and 'consumer choice' rather than 'parents as partners'" (Elliott, 2011, p. 54). It is possible that many of the participants had so fully internalised business-like language that they did not recognise the shift or their own language use. Smyth (2011) describes the connection between business language and marketing as schools engaged in "costly marketing and image self-promotion endeavours in the attempt to capture 'market share' in a context of dwindling central resourcing. Frontline educational leadership by principals has been totally undermined by converting them into CEOs concerned primarily with managing institutional 'bottom lines'" (p. 113). Heller-Sahlgren (2014) advocates for a competitive marketplace for schools using the language of consumerism, choice and productivity to push for systems to "induce genuinely competitive behaviour" (p. 197) and advocates for introducing a profit motive to increase competition between schools (Heller-Sahlgren, 2010). This scale demonstrates that competitive behaviour and a profit motive do seem to be connected within running a school like an EduBusiness. Competition may occur without the profit motive or business model, but those elements may be pre-requisites for teachers to experience their school as being run as an EduBusiness. Teachers may experience genuinely business-like behaviour before they recognise that the language of business has filtered into their usage.

While previous research has investigated the ways that schools behave as businesses to exclude children in the interest of being more competitive for results (Stevenson, 2007), this scale found less of a model of exclusivity in a system of

limited supply and more of a model of increasing supply and creating further demand for school places. For schools run as EduBusinesses, increasing capacity comes with automatic increase in funding and this may also be true of school systems with vouchers as well. Instead of competition for the top performing students, as Smyth (2011) and others have presented, or the strain on facilities in school lacking capacity, this scale demonstrates that the teachers in this research experienced increasing numbers of students and the implications for those increases. Teachers working in schools that were not particularly business-oriented still reported students be admitted throughout the year, competitive enrolment and enrolment of as many students as possible.

The pattern of an EduBusiness in a teacher's story. An example of the pattern of the EduBusiness scale was illustrated in the interviews. Reem (Participant 9-A-ME) told stories that elaborated the connections between these items. Reem described her years of work in the Middle East at Company A as an English and an additional language (EAL) teacher. She is an American teacher of Middle Eastern heritage and had previously worked in the US and in another country in the Middle East. She told a complex story of student enrolment and the relationship to the education business of her school. At the time, the school she worked at continuously enrolled students but limited the number of students who require EAL assistance to around 20 students per EAL teacher. Each EAL teacher worked with one grade level and stayed with one set of students for the school year. Just before the time of the interview, the school had met its limit of students per EAL teacher and had begun rejecting students for admission if they were known to need EAL services. When the corporate office heard that the school was overall below capacity but rejecting students, the school administration was directed to reallocate the teachers to allow

more EAL students into the school and to bring the school closer to capacity overall. Reem experienced a jarring shift in her work as the students she had been working with all year were moved to a different teacher and she was given a mix of students from other EAL teachers. She was suddenly put into a situation where she had to start over mid-year with a different set of students. Reem found that it was difficult to have her job change so suddenly, losing her relationships with students and receiving new students with little knowledge of her students' previous progress. She felt that after the students were reallocated, their development was hindered because the relationships were broken mid-year. Reem described how the teachers were blamed for the students' lack of progress after the change even though it felt obvious to her that the issues were due to the policies for enrolling as many students as possible. She described her frustration over feeling blamed when the work was set up to fail. She said, "of course when a teacher starts working with a student in January, it's not going to be 'til March—'til they identify whatever needs [the student has]—because, you know, every teacher is new and different, different style. Just because you pass down the file doesn't mean that I'm going to pick up where you left off. And then when you get railroaded because of progress that the kids made because they've [only] been in for a certain [amount of time]". Reem also told a story about the competition between schools and enrolment. Around the time of the interview, Company A had started to advertise a new school owned by the same company as her school and in the same city. The new school was advertised as elite, with all Oxford, Cambridge and Ivy League alumni teachers and the best facilities in the city. Reem felt that the company was competing against its own schools (including her school) and she felt it diminished the hard work she was doing for the company at an older and less ostentatious school.

Reem also told stories about how she felt the finances of the school directly affected her. She felt that the business affected her and the EAL department. Explaining how the EAL services were paid for in addition to school tuition, she felt that the teachers were treated as if the students paid directly for the EAL teachers' salaries. Reem described how the numbers seemed to be manipulatable to ensure that the money worked out. She said that it did not take long for an EAL teacher to realise that they needed to retain students in the EAL program to keep their jobs. She felt this had the potential for teachers to make decisions divorced from students' actual needs as there was pressure to retain students in the program to ensure there was continuing work for the teacher. Reem described how, if families did not pay the EAL fee, the students were denied the service. She felt the program then took on a purely business model rather than an educational model. If the parents did not want to pay the EAL fee or felt the additional help was unnecessary, the school administration would demand evidence from the EAL teachers about their communication with parents, records of the services they had offered and data on the progress the student had made. If the parents continued to not pay, the school would withhold a student's report which had consequences for the students being able to transfer schools. Reem described how this made her realise how money took precedence over everything else in decision making. She said "because it's such a big business, I think in marketing it comes off like they care for the students and they want the best for students. But I think the bottom line for them is money — how much are they making — and ultimately, that's much more important than the students. And you feel that with everything". The recent implementation of paying teachers' bonuses with shares in the company was fresh in her mind. She was unsure what to think saying, "I've never been a stockholder, never, so I don't know." However, she felt it was not truly

altruism that led to the decision to give teachers stock in the company saying, "it's not because they want to give us more, it's probably some business ploy" and described the scheme as "one way that we say the business [affecting our work]". Reem could not decide if receiving shares of the company was better or worse than being compensated in another way but noted that it was more of a business norm than an education practice. She also described her discomfort with business language, especially that her administrator was called "principal/CEO". She believed that the business title was beyond academic but had financial implications for how the principal was compensated as well. While she was uncomfortable with the business aspects of the work, she repeatedly commented that her work in the US public school system had been more personally taxing and that she was willing to accept some of the difficulties of working internationally because of the benefits to her and her family. Overall, while Reem's stories did not describe every item, her experience seems to elaborate the broader pattern of how an EduBusiness is experienced by teachers.

RQ3: Findings of the Teacher Experiences that Indicate Fulfilment and Buffering from Business Influences

As part of the overall question of how teachers experience their work in marketised contexts, a main theme was how teachers were buffered from the business influences on their work. Another important theme was the fulfilment teachers gained from their work. This scale combined items that were initially conceived as part of the buffering scale along with items designed from the theme of fulfilment from the interviews. The items were inspired by various work-related fulfilment and basic psychological needs scales. The title Buffering/Fulfilment was chosen because there was not one single term that encompassed both these concepts. The research question

was written to understand the experiences of teachers related to how much buffering they experienced from business influences and the amount of fulfilment they experienced in their work. The third question and its sub-questions are:

3. What teacher experiences indicate teachers' fulfilment and their buffering from marketisation influences?
    3a. What are the psychometric properties of this scale?
    3b. What idiosyncrasies of items and respondents were found for this scale?
    3c. What is the pattern of experiences of fulfilment and buffering?

To answer these questions, the results of the scale are presented to address sub-question A, the idiosyncrasies of the items are presented to respond to sub-question B and the main question is answered with the linear variable as described through the items. The accompanying analysis relates the scale back to teachers' stories of their experiences at work and the existing literature.

Psychometric properties of the Buffering and Fulfilment scale. A final re-check with Mokken scale analysis found that eight buffering items, six control items and 22 fulfilment items scaled together. Thirty-six items created a scale with a Loevinger's H-coefficient of 0.44 and a rho value of 0.96. The lowest performing item had a Loevinger's H-coefficient of 0.32. This was considered a moderately scalable set of items with good reliability and warranted further investigation with Rasch measurement.

Fit statistics and criteria. The final Rasch analysis of the scale was conducted using Winsteps (Linacre, 2017). The items were tested iteratively for fit, productive contribution to measurement, local independence and item bias through differential item functioning. Fit statistics indicate how the data fit the Rasch model. The mean-square residual summary statistics outfit ("outlier sensitive fit statistics") and infit ("inlier sensitive fit statistics" which are information-weighted fit) have an expected value of 1.0 and can range from 0 to infinity. Mean-square statistics of more than 1.0

indicate that the Rasch model is not fitting as well because the data are less predictable than expected. Mean-square statistics of less than 1.0 indicate overfit, that the Rasch model fits more predictably than expected. Infit statistics are sensitive to patterns of responses that are targeted on the person and outfit statistics are sensitive to patterns where the difficulty and person ability are very different. Infit and outfit statistics were used to identify problematic items using the criteria for rating scale survey items of 0.6 to 1.4. Nine items (M3, M6, M8, M9, M10, M11, B2, B3, B10) were excluded for high infit statistics. Ten other items (W2, W7, W8, W9, W10, W11, W13, W16, W20) were removed for Differential Item Functioning (DIF), the details of which are in the next section.

In the final analysis, 17 items and 168 persons were retained. The infit and outfit statistics were between 0.61 and 1.34 for all remaining items. Point-measure correlations of the items ranged from 0.58 to 0.77. The point-measure correlation indicates the correlation of the item to the overall score demonstrating that all the items are contributing to the overall measure. The details of the point-measure correlations and infit and outfit statistics can be found in Table 22. Person separation is used to classify people based on the items. This scale had a person separation of 3.32 where greater than 2.00 is considered good. Person reliability in Rasch analysis is generally equivalent to traditional test reliability and item separation indicates the strength of the item hierarchy (Linacre, 2000). This scale had a person reliability of 0.92. When item separation is greater than 3.00, it is good is evidence for validity that the person sample is large enough to confirm the difficulty ordering in the hierarchy of items. The item separation of this scale was 4.60 and the item reliability was 0.95. High item reliability means that the scale can be used to precisely locate the items on the latent variable in order and reliability of greater than 0.90 is considered good. The

sample of items and persons both followed a normal distribution, so item and person separation were used to determine strata. The items can be separated into four strata and the respondents can be separated into three strata of ability.

Yen's Q3 tests for local item dependency between pairs of items was used to find redundant items that did not aid in increasing the quality of the scale but may artificially increase the reliability. In this scale, the highest correlation was 0.20.

Distribution of sample on the linear variable. The comparison of people versus items can be seen in the Wright Map in Figure 14.

Figure 14 demonstrates that the items of the Buffering/Fulfilment scale had a range of difficulty spread over the range of respondents and that the respondents were spread over the range of the scale in a fairly normal distribution. The mean of the person measures and the mean of the items were close but not aligned. The items are distributed along the range of difficulty but many of the items are measuring in the middle of the scale. This likely did not cause any problems to the scale but means that the scale would have been similarly effective with fewer items.

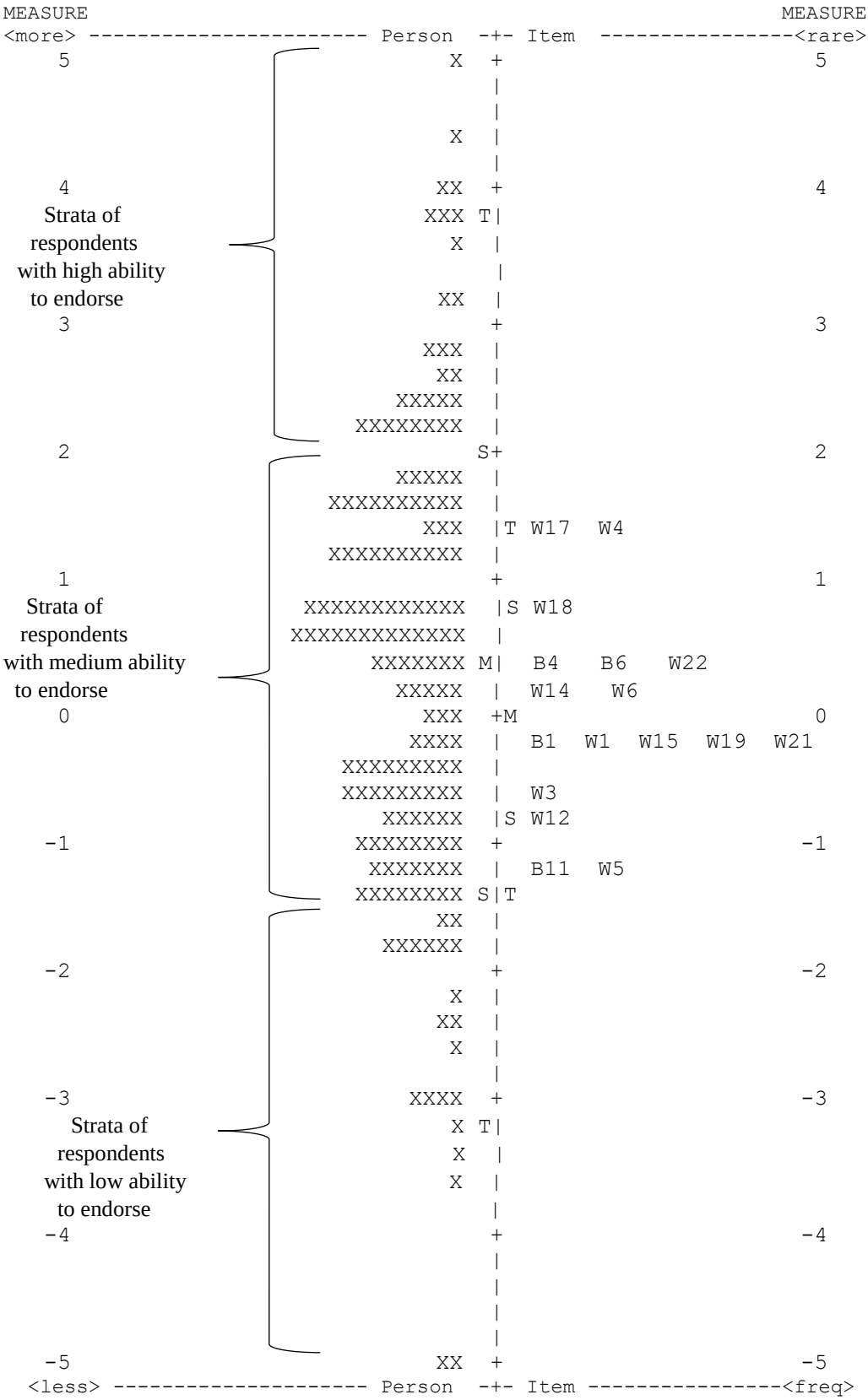


Figure 14. Wright map for Buffering/Fulfilment scale. Each X= one person.

Functioning of rating scale and categories. The rating scale performed well with four response categories with Andrich thresholds of -3.19, -.44, 3.63. None of the items had disordered thresholds where the average ability of respondents to endorse items was out of order by response category. Figure 15 shows the category probabilities and Andrich thresholds at the intersections.

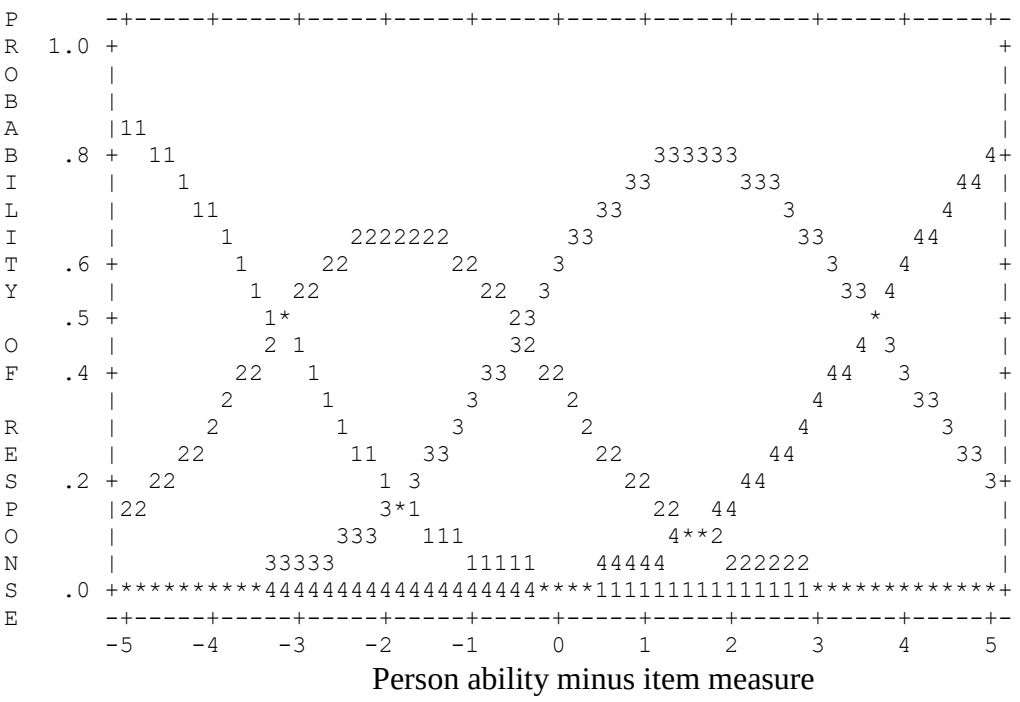


Figure 15. Response category probabilities and Andrich thresholds for the Buffering and Fulfilment scale.

The construct key map in Figure 16 demonstrates the functioning of the rating scale across the items as a group and shows the distribution of the respondents along the scale. The Buffering and Fulfilment scale items covered a range of experiences with good variation in the difficulty of the items, no disordered thresholds for any of the items, and four item strata.

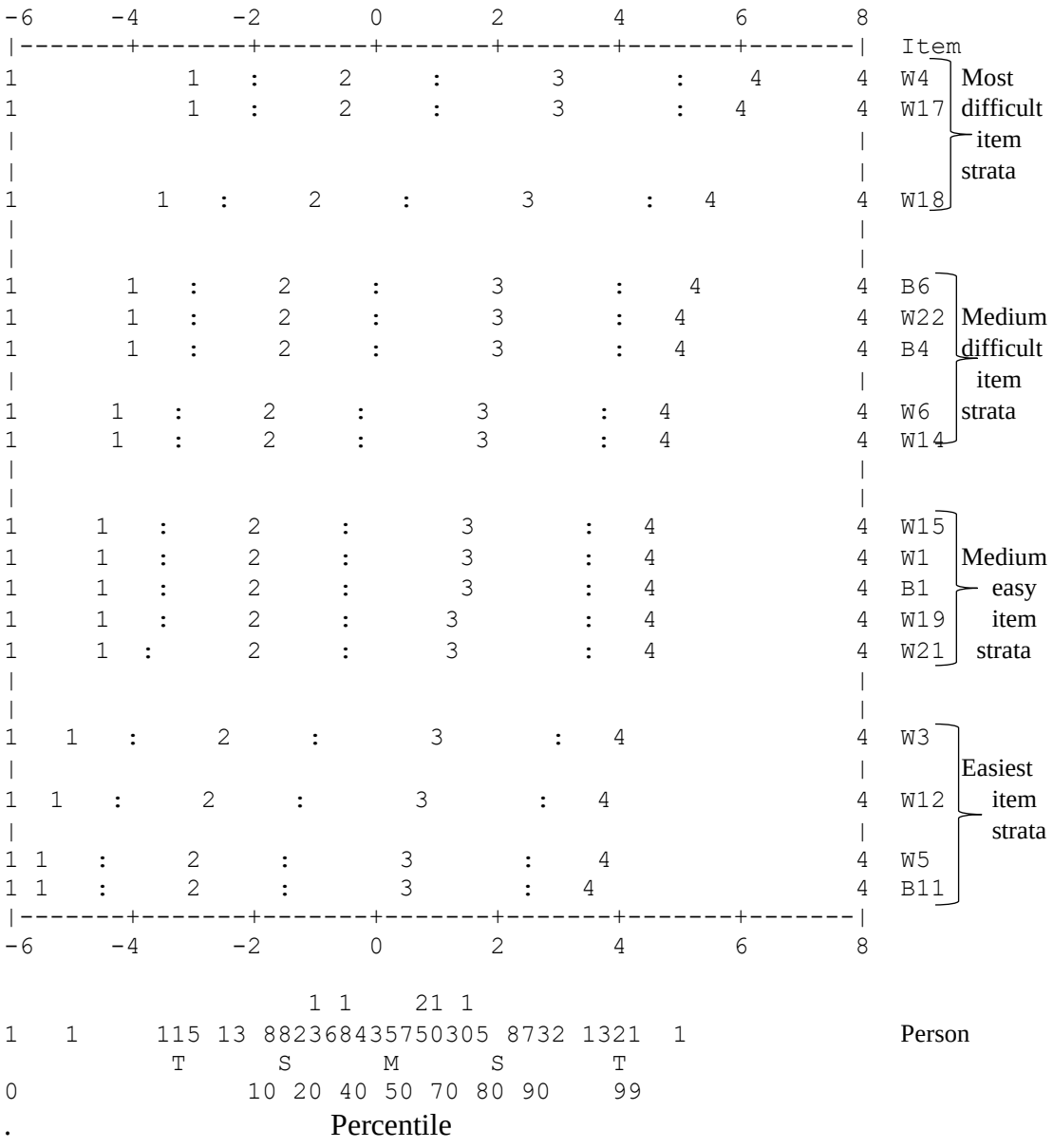


Figure 16. Construct key map for the Buffering and Fulfilment scale.

Table 17 demonstrates that overall, the rating scale with four categories performed well. Each category had acceptable infit and outfit mean square values and the Andrich Thresholds were different by at least 1.50 with acceptable standard error for each step. All four categories garnered responses for each item of the scale.

Table 17

Summary of the Buffering/Fulfilment scale category functioning

Category Label	Observed Count	Infit MnSq	Outfit MnSq	Andrich Threshold	Step Standard Error
1 (Strongly Disagree)	208	0.92	0.91		
2 (Disagree)	911	0.98	0.96	-3.19	0.09
3 (Agree)	1481	0.98	0.98	0.44	0.05
4 (Strongly Agree)	256	1.09	1.06	3.63	0.08

Investigating secondary dimensions. The raw variance explained by measures was 49.9% compared to 49.4% modelled with 33.3% explained by persons and 16.6% explained by items. In an analysis of the unexplained variance, the first contrast of unexplained variance was 5.9% of the variance with an eigenvalue of 1.99. The remaining contrasts were smaller and none of the eigenvalues were over 3, suggesting that the data is likely unidimensional.

Idiosyncrasies of items and persons. The Buffering and Fulfilment scale had many significant idiosyncrasies of items and some misfit of respondents. Many items were included in the scale initially but excluded for the final analysis due to differential item functioning (DIF). While the items were measuring the same latent variable as the rest of the items, retaining items demonstrating DIF may change the nature of the measurement. DIF analysis is used to find items that measure differently across respondents of similar ability but in different groups and is commonly referred to as item bias. When it is found in the initial analysis of a scale, those items should be removed (Tennant & Pallant, 2007). DIF was tested comparing gender groups, comparing government/public school or private school, non-profit or for-profit school, comparing respondents who were national or international teachers, and teachers who were early childhood/primary or secondary teachers. In this scale, DIF was detected as affecting eleven items.

DIF for gender. In the comparison across gender groups, men were compared against women. While there were other categories available, all respondents used "male" or "female" to identify their gender. DIF by gender affected four items.

Table 18

DIF for gender for the Buffering/Fulfilment scale

Item	Item Text	DIF Contrast	Outcome
W7	There is a collaborative school culture which is characterised by mutual support	-0.55, p<.05	Easier for female teachers
W8	I feel included in the group I want to belong to at work	-0.57, p<.05	Easier for female teachers
W11	Teachers are there for each other	-.073, p<.05	Easier for female teachers
W20	My superiors allow me input into decisions that affect me	0.61, p<.05	Easier for male teachers

DIF for school type. Respondents were asked to categorise their school as a government/public or private school. DIF by school type was found to affect five items.

Table 19

DIF for school type for the Buffering/Fulfilment scale

Item	Item Text	DIF Contrast	Outcome
B5	Administrators encourage critical discussion of the purpose of the school	1.00, p<.05	Easier for public school teachers
W7	There is a collaborative school culture which is characterised by mutual support	.69, p<.05	Easier for public school teachers
W9	There is a team spirit through all ranks in this school	.62, p<.01	Easier for public school teachers
W10	The board/governors/owners of the school have a strong relationship with teachers	.74, p<.05	Easier for public school teachers
W13	The tasks I am required to do at work are in line with what I want to do	-0.92, p<.01	Easier for private school teacher

DIF for profit status. Respondents were asked to report the non-profit or for-profit status of their school. Public and government schools were included as "non-profit". DIF by profit status was found to affect three items.

Table 20

DIF for profit status for the Buffering/Fulfilment scale

Item	Item Text	DIF Contrast	Outcome
B5	Administrators encourage critical discussion of the purpose of the school	-0.88, p<.01	Easier for non-profit school teachers
W7	There is a collaborative school culture which is characterised by mutual support	-0.73, p<.01	Easier for non-profit school teachers
W16	I feel like I have been doing what really interests me in my job	0.83, p<.05	Easier for for-profit school teachers

DIF for level. Respondents were asked to report what level of school they taught. Respondents were given multiple response categories but the responses were re-coded into early childhood/primary school teachers, secondary school teachers and Other. For the DIF analysis, Early childhood/Primary teachers were compared against secondary school teachers only. DIF by level taught was found to affect one item.

Table 21

DIF for level for the Buffering/Fulfilment scale

Item	Item Text	DIF Contrast	Outcome
W2	The school makes me feel important as a member of staff	.52, p<.05	Easier for secondary teachers

DIF for international teaching status. In the comparison across groups, there was no DIF found for international teaching status.

Idiosyncrasies of persons. Significant amounts of person misfit were found in this scale. Thirty-six respondents were excluded from the scale for indicating high amounts of misfit as measured by mean-square infit and outfit values over 2. While 36 respondents excluded from the scale is 18% of the total respondents, they do seem to be a random selection of the respondents overall. When looking at the demographic data supplied by respondents, the respondents who were excluded seem to have a similar distribution according to age, years as a teacher, school size, and the five contrasts used for DIF analysis which can be seen in Table 33.

Pattern of experiences of Buffering and Fulfilment

The teacher experiences that indicate teacher's fulfilment and buffering from marketisation influences can be described by the Buffering/Fulfilment scale. Due to the nature of the analysis, the variable can be broken up into four levels of difficulty of items from most common to least common. Figure 17 demonstrates the item hierarchy with items separated into four strata and ordered by difficulty.

Table 22

Item quality statistics for the Buffering/Fulfilment scale

Item number	Measure	S.E.	Infit MnSq	Outfit MnSq	Pt-measure corr
W4	1.40	.14	1.00	0.99	.71
W17	1.36	.14	0.78	0.79	.75
W18	0.79	.14	0.97	0.96	.74
B6	0.40	.14	1.13	1.34	.60
W22	0.36	.14	0.97	0.95	.73
B4	0.34	.14	1.05	1.07	.61
W6	0.13	.14	0.79	0.77	.76
W14	0.13	.15	1.13	1.14	.63
W15	-0.18	.15	0.63	0.62	.75
W1	-0.20	.15	1.00	1.00	.74
B1	-0.22	.15	1.26	1.25	.58
W19	-0.24	.15	0.63	0.61	.77
W21	-0.29	.15	0.88	0.86	.76
W3	-0.64	.15	0.87	0.83	.65
W12	-0.89	.15	1.17	1.13	.67
W5	-1.10	.15	1.22	1.14	.53
B11	-1.13	.15	1.18	1.22	.60

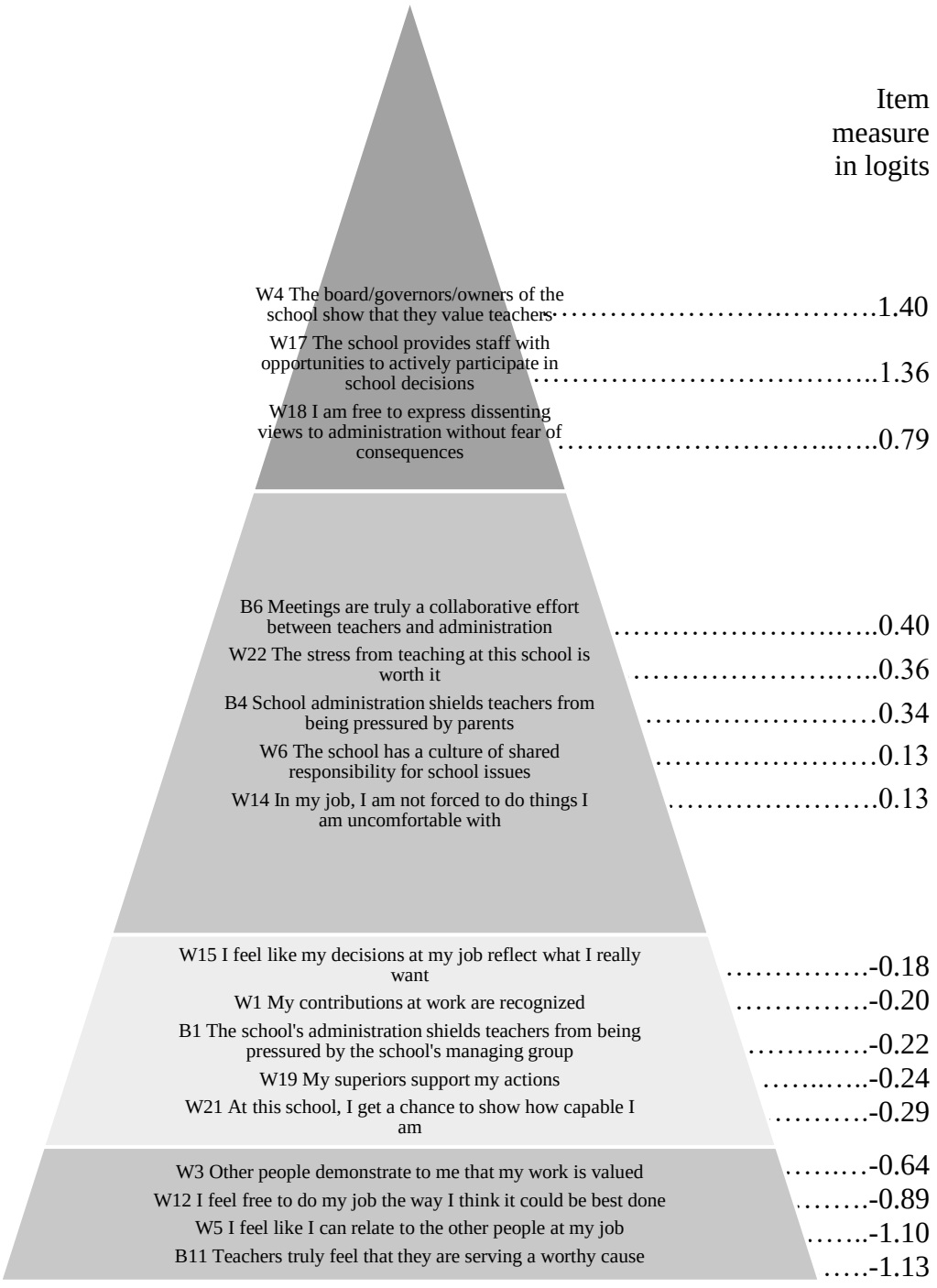


Figure 17. Item hierarchy for Buffering/Fulfilment scale.

Analysis of the pattern of Buffering and Fulfilment Scale. The Buffering/Fulfilment Scale demonstrates a connection between teachers' basic psychological needs (autonomy, competence and relatedness), teachers' feelings of professional judgement, the buffering from outside influence, and their feelings of

being recognised and supported. This was a multi-faceted construct with many items that seem to come from different conceptual areas forming a scale together. As a set of items, the construct describes many elements of teacher fulfilment and their buffering from external influences. The easiest items to endorse were about teachers feeling like they are serving a worthy cause and reporting that they felt like they could relate to other people at their work. The most difficult items to endorse were perceptions that staff participated in decision making and the teachers feeling valued by the governors or owners of their school. The main themes of the items and their relationship to previous literature are discussed here.

Recognition and support. Teacher recognition and support are demonstrated in items about teachers having their contributions recognised and feeling support from their superiors. These were included in the scale along with items about other people demonstrating to them that their work is valued and the governors or owners of the school showing that they value teachers. Items about staff having opportunities to participate in school decisions, expressing dissenting views and meetings being a collaborative effort were also included in this scale. These items all centre around ideas of teachers' positive experiences at school coming from feeling recognised, supported and involved in school operation. Previous literature notes the importance of teachers feeling included, valued and supported in their work. Santoro (2011) argues that the personal rewards of teaching come not from an individual's disposition, but teachers' feelings of the community of practice at their school. She argues for "structuring the work to enable practitioners to do good within its domain" (p. 19). This fits with earlier research conducted by Nias (2002) where she argues that teachers thrive through relationships with their colleagues and students. This connects with the next theme of the items of autonomy, competence and relatedness.

Basic psychological needs (Autonomy, competence and relatedness). This scale was partially constructed with existing scales of basic psychological needs (Deci & Ryan, 2011) so it is not surprising that autonomy, competence and relatedness formed a scale together. Items about teachers' feelings of being free to do their work as they think best, feeling their decisions reflect what they want at work and not being forced to do things they are uncomfortable with fit with principles of teacher autonomy. Teachers feelings of being able to relate to their co-workers, feeling a shared responsibility, and being able to demonstrate how their capability fit with the relatedness and competence themes. The combination of these items with teachers' feelings of recognition and support align with how Nias (2002) previously observed that teachers' satisfaction comes from being with children, seeing them making progress, teachers' own feelings of personal growth, and feeling able through their work. While it is not surprising that items from previous scales about basic psychological needs fit together, the combination with buffering items is an interesting addition.

Buffering. The items about teachers feeling shielded from pressure by parents, from pressure from the school's managing group, from feeling the stress at the school was worth it, and feeling that teachers serve a worthy cause were connected in this scale. Surprisingly, the basic psychological needs items were not a separate construct from the buffering items and it was unexpected that they were found to be part of the same scale. Rosenholtz and Simpson (1990) found that buffering by school administration was closely associated with task discretion and autonomy and that these were the highest correlates with teachers' commitment to their work. However, going beyond the current literature was the direct connection of the buffering items to the items about autonomy, competence and relatedness. This added dimension of

buffering means that teachers' autonomy, competence and relatedness are not just correlated conditions but part of the same construct and are connected to feelings of buffering from the influences of parents and the school's managing group.

Contrary to the literature about autonomy, competence and relatedness, the most obvious items were excluded from the scale during the pilot. This is likely different due to the choice of Mokken scale analysis and Rasch analysis for the methods while much of the existing quantitative analysis of basic psychological needs uses variations of factor analysis (for a recent example see Korthagen & Evelein, 2016). In the pilot of this scale, the items "I feel competent in my job" and "I see that my work has an impact when my students are successful" were so positively endorsed by teachers that there was zero disagreement. This means that the items are not useful for measuring teachers' experiences at work. In Rasch analysis, items that do not allow a range of experiences are excluded and are not robust enough to be included in a scale. Because every teacher agreed or strongly agreed with these items, they were not informative for the construct or the people measured by the scale. While these items would be included in a traditional factor analysis and are frequently included in Self-determination Theory (SDT) literature about basic psychological needs (e.g., van den Broeck, Vansteenkiste, De Witte, Soenens & Lens, 2010), they were not part of the findings of this research.

The pattern of Buffering and Fulfilment in teachers' stories. No single teacher exemplified the pattern of buffering and fulfilment, although the items were present across many interviews. The teachers described how they felt international schools brought new challenges to teaching and a joy in teaching a "different breed" of students who have lived interesting lives growing up overseas (Participant 2-C2-SA). Participant 14-B-ME described the relationship between co-workers opening a

new school that "we were in this together, it was like a family almost." The connection between teacher fulfilment and choosing how the work is done was noted by Participant 10-A-ME1. She described how she felt control over how she wanted to run the counselling program at her school. She realised that no administrator, other teacher or parent presumed they knew how to do her job better than her and she enjoyed the autonomy. Participant 6-C2-SA described how she felt supported by fantastic teachers and generally very good administration. Those circumstances helped her maintain feeling passionate about teaching and showed her that she was valued. Teachers told stories about how their jobs allowed them to show their capabilities. Participant 9-A-ME felt that teaching EAL was very rewarding because the students made quick and noticeable progress. Participant 16-A-SA described how "site-based-management" allowed the school's administration to shield the teachers from pressure by the company. She described how the feeling was "you can run this school however you want" until the managing group came to evaluate the school. School administration buffered teachers against parent pressure as one teacher reported their head teacher saying, "parents push and we push back" (19-A-UK). Participant 1-C1-SA described how she felt her contributions were recognised as her colleagues recommended for her to become the team leader. Even though she was reticent to take on the job, her co-workers supported and encouraged her to take on the leadership role. Participant 3-C1-SA felt that their latest and final meeting of the school year was truly collaborative as teachers were able to discuss what had bothered them throughout the year. She said that the faculty openly discussed problems with curriculum, low pay and benefits, limits on professional development, problems related to safeguards and issues with communication. She felt that the meeting clarified a lot of problems and helped them plan better for the next school year. While

no individual teacher had a story that demonstrated the pattern of the scale, the teachers together experienced many of the items.

RQ4: Findings of the Teacher Experiences that Indicate Lack of Control

As part of the overall question of how teachers experience their work in marketised contexts, a main theme was teachers' feelings of control over their work. This scale was constructed from items originally conceived as part of the marketisation theme but conceptually overlapped with items that asked about teachers' lack of control over their work. Because *control* was originally tested as a separate construct, this scale was titled Lack of Control and the research question was written to understand the experiences of teachers related to the extent to which teachers felt the conditions of their work were out of their control. The fourth question and its sub-questions are:

4. What teacher experiences indicate lack of control over their work?
    4a. What are the psychometric properties of this scale?
    4b. What idiosyncrasies of items and respondents were found for this scale?
    4c. What is the pattern of experiences of lack of control?

To answer these questions, the results of the scale are presented to address sub-question A, the idiosyncrasies of the items are presented to respond to sub-question B and the main question is answered with the linear variable as described through the items. The accompanying analysis relates the scale back to teachers' stories of their experiences at work and the existing literature.

Psychometric properties of the Lack of Control Scale. A final re-check with Mokken scale analysis found that most of the marketisation items scaled together with five of the Lack of Control items and five of the EduBusiness items. These further divided into the Business Influences scale, the EduBusiness scale and a scale of a mix of lack of control items and marketisation items. Thirteen items created a

scale with a Loevinger's H-coefficient of 0.55 and a rho value of 0.93. The lowest performing item had a Loevinger's H-coefficient of 0.42. This was considered a strongly scalable set of items with good reliability and warranted further investigation with Rasch measurement.

Fit statistics and criteria. The final Rasch analysis of the scale was conducted using Winsteps (Linacre, 2017). The items were tested iteratively for fit, productive contribution to measurement, local independence and item bias through differential item functioning. Fit statistics indicate how the data fit the Rasch model. The mean-square residual summary statistics outfit ("outlier sensitive fit statistics") and infit ("inlier sensitive fit statistics" which are information-weighted fit) have an expected value of 1.0 and can range from 0 to infinity. Mean-square statistics of more than 1.0 indicate that the Rasch model is not fitting as well because the data are less predictable than expected. Mean-square statistics of less than 1.0 indicate overfit, that the Rasch model fits more predictably than expected. Infit statistics are sensitive to patterns of responses that are targeted on the person and outfit statistics are sensitive to patterns where the difficulty and person ability are very different. Infit and outfit statistics were used to identify problematic items using the criteria for rating scale survey items of 0.6 to 1.4. No items were excluded for high infit or outfit statistics. One item (BI22) was removed for Differential Item Functioning (DIF), the details of which are in the next section.

In the final analysis, 12 items and 184 persons were retained. The infit and outfit statistics were between 0.67 and 1.41 for all remaining items. Point-measure correlations of the items ranged from 0.63 to 0.83. The point-measure correlation indicates the correlation of the item to the overall score demonstrating that all the items are contributing to the overall measure. The details of the point-measure

correlations and the infit and outfit statistics can be found in Table 25. While item BI16 had a fit statistic of 1.41 exceeding the criteria, the item was retained to err on the side of inclusion rather than scale optimisation. Person separation is used to classify people based on the items. This scale had a person separation of 3.18 where greater than 2.00 is considered good. Person reliability in Rasch analysis is generally equivalent to traditional test reliability and item separation indicates the strength of the item hierarchy (Linacre, 2000). This scale had a person reliability of 0.91. Item separation indicates the strength of the item hierarchy. When item separation is greater than 3.00, it is good is evidence for validity that the person sample is large enough to confirm the difficulty ordering in the hierarchy of items. The item separation of this scale was 4.21 and the item reliability was 0.95. High item reliability means that the scale can be used to precisely locate the items on the latent variable in order and reliability of greater than 0.90 is considered good. The sample of items and persons both followed a normal distribution, so item and person separation were used to determine the strata. The items can be separated into four strata and the respondents can be separated into three strata of ability.

Yen's Q3 tests for local item dependency between pairs of items was used to find redundant items that did not aid in increasing the quality of the scale but may artificially increase the reliability. Local dependence may be present when the correlation between items is more than .70, indicating that the items share more than half of their random variance and only one of the items would be necessary for measurement (Linacre, n.d.-c). In this scale, the highest correlation was 0.38.

Distribution of sample on the linear variable. The comparison of people versus items can be seen in the Wright Map in Figure 18.

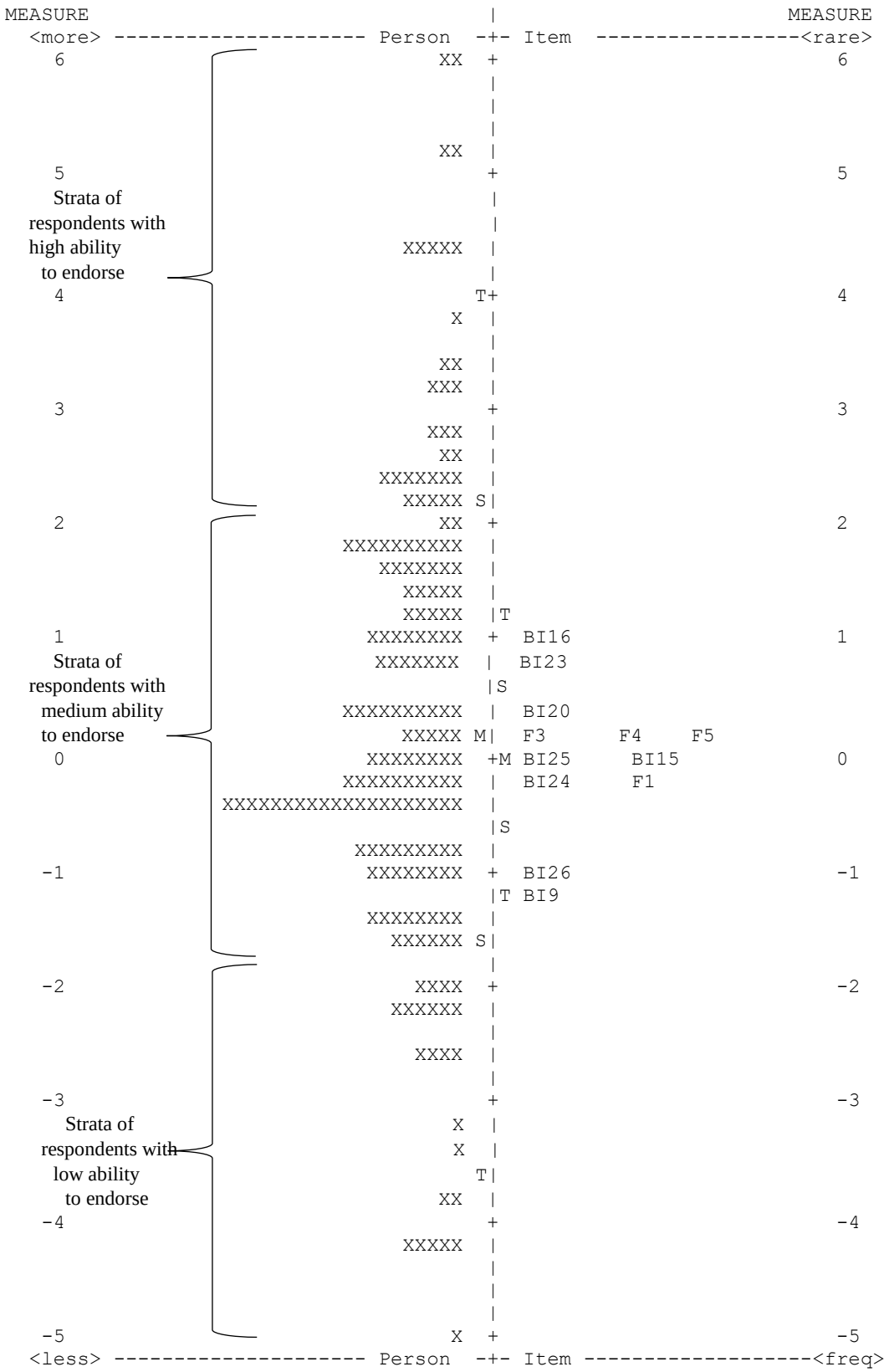


Figure 18. Wright map for the Lack of Control scale. Each X=one person.

Figure 18 demonstrates that the items of the Lack of Control scale had a range of difficulty spread over the range of respondents and that the respondents were

spread over the range of the scale in a fairly normal distribution. The mean of the person measures and the mean of the items were nearly aligned. While the items are somewhat bunched in the middle of the scale, the four response categories meant that respondents were able to demonstrate a range of experiences.

Functioning of rating scale and categories. The rating scale performed well with four response categories with Andrich thresholds of -3.04, 0.47, 2.57. None of the items had disordered thresholds where the average ability of respondents to endorse items was out of order by response category. Figure 19 shows the category probabilities and Andrich thresholds at the intersections.

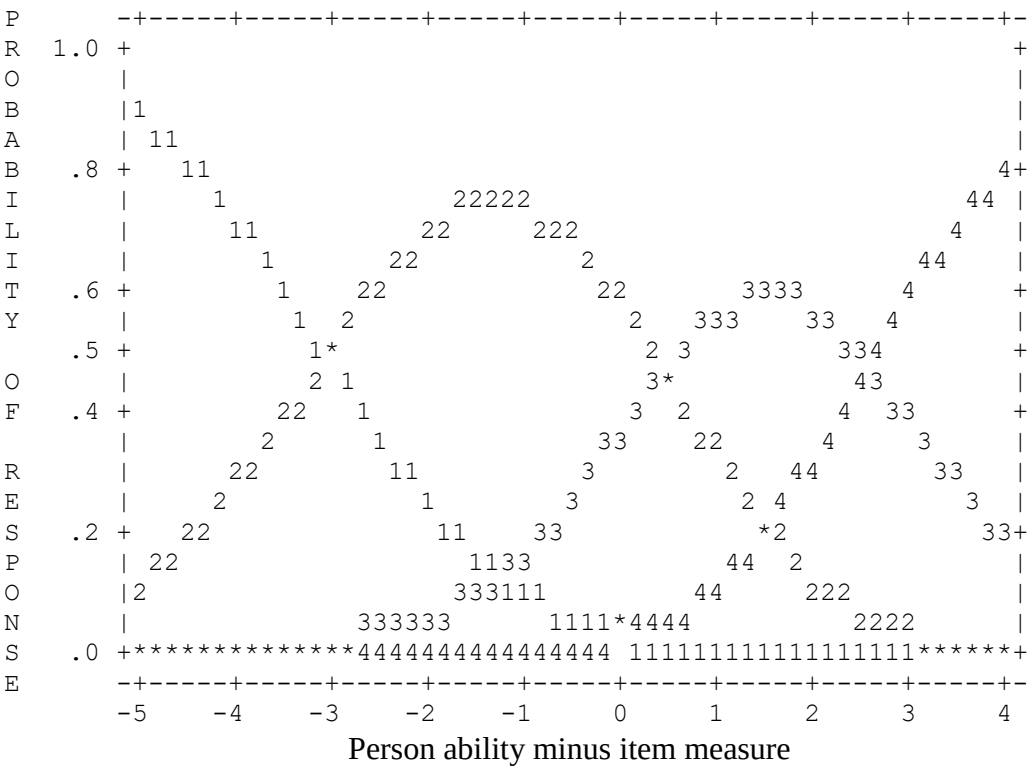


Figure 19. Response category probabilities and Andrich thresholds.

The construct key map in Figure 20 demonstrates the functioning of the rating scale across the items as a group and shows the distribution of the respondents along the scale. The Lack of Control scale items covered a range of experiences with good

variation in the difficulty of the items, no disordered thresholds for any of the items and four item strata.

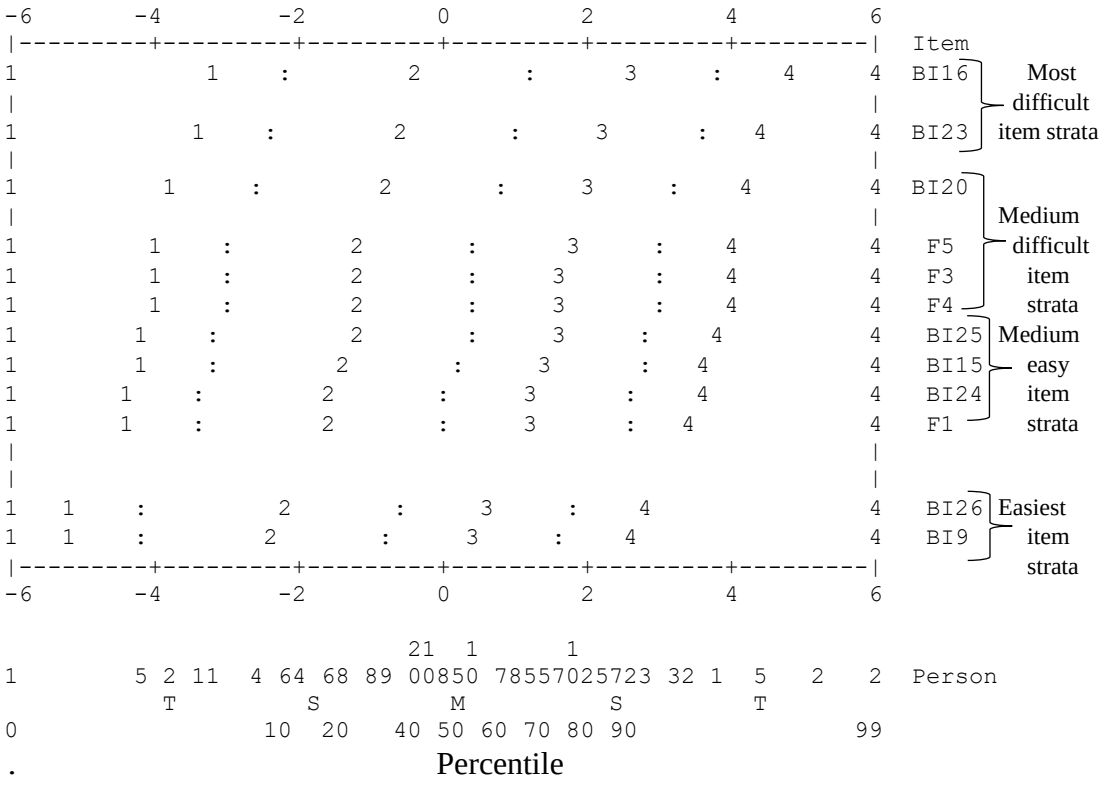


Figure 20. Construct key map for the Lack of Control scale.

Table 23 demonstrates that overall, the rating scale with four categories performed well. Each category had acceptable infit and outfit mean square values and the Andrich Thresholds were different by at least 1.50 with acceptable standard error for each step. All four categories garnered responses for each item of the scale.

Table 23

Summary of the Lack of Control scale category functioning

Category Label	Observed Count	Infit MnSq	Outfit MnSq	Andrich Threshold	Step Standard Error
1 (Strongly Disagree)	216	1.03	1.00	-3.04	0.09
2 (Disagree)	932	1.01	1.02	0.47	0.06
3 (Agree)	700	0.99	0.95	2.57	0.08
4 (Strongly Agree)	360	0.97	0.98		

Investigating secondary dimensions. The raw variance explained by measures was 56.8% compared to 56.6% modelled with 39.4% explained by persons and 17.4% explained by items. In an analysis of the unexplained variance, the first contrast of unexplained variance was 7.0% of the variance with an eigenvalue of 1.95. The remaining contrasts were smaller and none of the eigenvalues were over 3, suggesting that the data is likely unidimensional.

Idiosyncrasies of items and persons. Many items were included in the scale initially but excluded for the final analysis due to differential item functioning (DIF). While the items were measuring the same latent variable as the rest of the items, retaining items demonstrating DIF may change the nature of the measurement. DIF analysis is used to find items that measure differently across respondents of similar ability but in different groups and is commonly referred to as item bias. When it is found in the initial analysis of a scale, those items should be removed (Tennant & Pallant, 2007). DIF was tested comparing gender groups, comparing government/public school or private school, non-profit or for-profit school, comparing respondents who were national or international teachers, and teachers who were early childhood/primary or secondary teachers. In this scale, DIF was detected as affecting one item.

DIF for school type. Respondents were asked to categorise their school as a government/public or private school. DIF by school type was found to affect one item.

Table 24

DIF for school type for the Lack of Control scale

Item	Item Text	DIF Contrast	Outcome
BI22	Staff members do what they are told out of fear of repercussions	0.59, p<.01	Easier for public school teachers

DIF for gender, international teaching status, profit status and level. In the comparison across groups, there was no DIF found for gender, international teaching status profit status or level.

Idiosyncrasies of persons. Some person misfit was found in this scale. Twenty respondents were excluded from the scale for indicating high amounts of misfit as measured by mean-square infit and outfit values over 2. Seventeen respondents excluded from the scale is 9% of the total respondents. The demographics can be seen in Table 33.

Pattern of experiences of Lack of Control. The teacher experiences that indicate lack of control over their work can be described by the Lack of Control scale. Due to the nature of the analysis, the variable can be broken up into four levels of difficulty of items from most common to least common. Figure 21 demonstrates the item hierarchy with items separated into four strata and ordered by difficulty.

Table 25

Item quality statistics for the Lack of Control scale

Item number	Measure	S.E.	Infit MnSq	Outfit MnSq	Pt-measure corr
BI16	0.97	.13	1.41	1.40	.63
BI23	0.74	.13	0.98	0.96	.72
BI20	0.44	.13	0.95	0.95	.77
F5	0.18	.13	1.22	1.19	.73
F3	0.17	.13	0.96	0.92	.80
F4	0.17	.13	0.89	0.88	.77
BI25	0.02	.13	0.67	0.67	.83
BI15	-0.07	.13	1.08	1.03	.73
BI24	-0.24	.13	0.78	0.77	.81
F1	-0.27	.13	1.19	1.20	.67
BI26	-0.98	.13	0.77	0.73	.80
BI9	-1.13	.13	1.09	1.15	.67

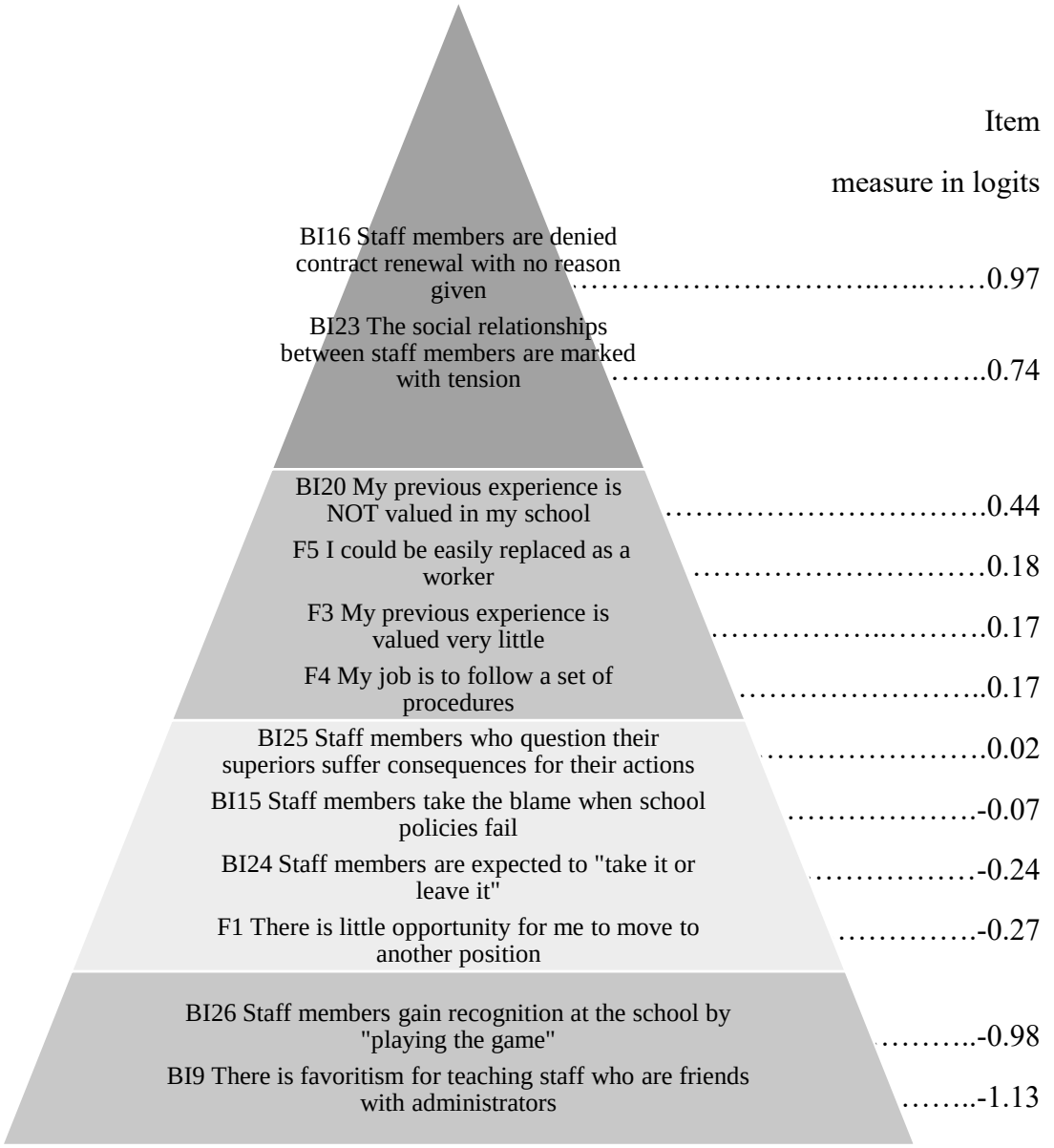


Figure 21. Item hierarchy for the Lack of Control scale.

Analysis of the pattern of the Lack of Control. The Lack of Control Scale demonstrates a connection between professional lack of control, job insecurity and social insecurity at the workplace. As a set of items, the construct connected items that were initially conceived as part of the Marketisation construct and items conceived as describing teachers' feelings of lack of control over their work.

Lack of control. Items that indicated teachers' feelings of being easily replaceable, having their experience not valued, having little opportunity to move to

other positions and characterising their work as following procedures demonstrate lack of control over their work. This fits with Standing's (1989) discussion of the different types of control over work. These items demonstrate that teachers' experiences form a pattern of a lack of control over their own labour reproduction and over themselves as workers. The personal feelings of lack of control constructed a scale together with perceptions about school policies that contributed to job insecurity.

Job insecurity. This scale included items about school policies of a *take it or leave it* culture, teachers taking the blame when school policies fail, consequences for teachers who question their superiors and the possibility of being denied contract renewal. Rather than personal feelings of a lack of control, these items relate to teachers' experiences of how practices of their school relate to insecurity in their job. The items fit with the findings about the labour process of teachers by Ozga and Lawn (1988) who explain how precarious conditions lead to feeling easily replaceable and contract renewal being denied. The particular insecurity of international teachers is noted by Bunnell (2016) who borrows the *precariate* language from Ozga and Lawn to describe the relationships between different types of workers in international schools. This scale fits with the findings of Ozga and Lawn (1988) who describe the relationship of job insecurity to social insecurity.

Social insecurity. The social insecurity of teachers was evident in items about favouritism for certain members of staff, *playing the game* as a teacher and tense social relationships. Conley and Jenkins (2011) describe how collegial relationships change to managerial relationships in marketised contexts, fitting with items in this scale about the social relationships in the school. The gendered nature of how work is controlled through social relationships and *playing the game* are described by many authors in a variety of contexts (e.g., Connell & Messerschmidt, 2005, Duckworth et

al, 2016; Dunford & Perrons, 2014, Boler, 1997; Peterson, 1996; Standing, 1989). This literature demonstrates that workers who are able to withstand a lack of control over their work or who can take control through social mechanisms are already privileged. On the other hand, those who have lower social status have their lack of control "ignored, redescribed as enjoyment or justified as freely chosen, deserved, or inevitable (Jagger, 2004, p. 56). This scale demonstrates the connection between teachers' feelings of lack of control personally in their work and socially at their workplace.

The pattern of Lack of Control in a teacher's story. An example of this pattern was illustrated in the interviews. Sona (Participant 15-B-ME) told stories that demonstrated the connections between these items. Sona described her years of work in the Middle East at Company B. She is a British national of Indian descent with a Master's degree in computer science but she had been hired without a teaching certification. She had previously volunteered in a school in England and, after relocating to the Middle East, began to work as a teaching assistant in her current school. Sona's stories elaborate the pattern of the Lack of Control scale. She described favouritism for particular staff members. She felt that, in her school, the primary head of school treated the teaching assistants (TAs) differently based on whether they had children in the school or not. She felt that there was a "kind of inhumane" division of labour where the TAs without children in the school were given cleaning work or silly jobs while those with children in the school were assigned better duties. Sona described coming into the school feeling like there was a lot of growth opportunity. Unfortunately, because she had not yet finished her teacher education program, she was told they could not use her as a cover teacher, but she could serve as a TA. Sona saw some potential to move up into a teaching job but

expressed worry that "even if I do that [get a teaching job], I will still be treated as a TA." Although she was frequently asked to act as a cover teacher, she was told that they would not hire her in that position. At the time of the interview, she had recently completed her teacher certification. However, she had re-signed to work as a TA, not yet feeling the ability to move to a better position.

Sona's stories described the connection between recognition and blame. She described how she had used her mathematics and technology training to help design special resources for math intervention. Her cooperating teacher had gained significant recognition around the school from sharing the resources that Sona had created. Even when the teacher tried to give credit to Sona, she felt that the other teachers continued to praise the classroom teacher and ignore her contribution. She felt that, in general, when school policies had failed or the classroom teachers had made a mistake, the TAs were the first to be blamed. She described a situation where the cooperating teachers had not planned thoroughly enough and expected the TAs to fill in the gaps. When the results were not perfect due to the teachers' poor communication and planning, it seemed unfair to her that the TAs were blamed and treated poorly. While she felt she and the other TAs were unlikely to be recognised even when they worked hard and were successful, she felt it was common for them make a small mistake or have a less-than-ideal moment and receive a lot of blame.

Sona also told an interesting story about the implementation of a uniform for the TA staff. The uniform for the TAs looked similar to the uniform for the cleaning staff and to her "it was very humiliating." The TAs were all expected to wear the uniform or quit if they did not like it. She remembered that several TAs resigned during that time. The primary head of school was charged with fixing the situation and, in her opinion, the head "had been told to make these 160 odd people to just shut

up." Sona found that her previous experience and education was valued very little as she felt "no recognition, no respect, nothing" even when she was covering classes in advanced subjects. She counted herself lucky that she had a good relationship with her cooperating teacher, but she knew other TAs who felt "absolute agony sitting in the same room" as the classroom teachers. Overall, Sona's stories elaborate the pattern of how teachers experience a lack of control at their schools.

RQ5: Findings for the Relationship between the Scales

As part of the overall question of how teachers experience their work in marketised contexts, the four themes emerged: business influences on teachers' work, the effect on teachers of their school being run as an EduBusiness, teachers' experiences of buffering and fulfilment, and teachers' feelings of lack of control over their work. The final question sought to investigate the relationships between these scales.

This question was answered through simple linear regression analysis, multiple regression analysis and path analysis. After obtaining Rasch calibrated measures for each respondent for each scale, the next question was: What are the relationships between the variables? While each individual variable is interesting and relates back to the stories of teachers, further investigation may clarify the processes of how business influences on teachers' work are related to the buffering and fulfilment they feel, the lack of control they have over their work and the extent to which their school is run as a business. This was initially investigated through pairs of variables to find significant relationships between them. The relationship between all the available variables was then considered simultaneously with path analysis.

Linear Regression Analysis and Results. Each pair of variables was analysed using regression analysis. While representing items on an xy graph is often used to symbolise causation, there are no claims of causation here. Instead, the graphs were used to explore the relationship between the two variables. The choice of which variable to place on each axis was determined based on which relationship most logical rather than with the intent to prove causation. For example, logically the extent to which a school is run as a business would seem to cause business influence on teachers' work rather than the other way around. Similarly, teachers' feelings of the influences on their work may be partially explained by their own feelings of fulfilment in their work, so Buffering/Fulfilment was used to predict Business Influences. Lack of Control was not used as a predictor as it seemed it would logically be caused by the other factors. This set of simple linear regression analyses demonstrated that the four variables are all related to each other. The full set of statistical results can be seen in Table 26.

Table 26

Results for regression analysis with Rasch measures

'Dependent'	'Independent'	R^2	F	df	sig	B (constant)	B(ind)	sig
Business Influence	Buffering/Fulfilment	0.49	140.38	(1,148)	p<.01	0.35	-0.60	p<.01
Business Influence	EduBusiness	0.33	75.71	(1, 154)	p<.01	-0.05	0.42	p<.01
Buffering/Fulfilment	EduBusiness	0.12	19.44	(1,146)	p<.01	0.42	-0.26	p<.01
Buffering/Fulfilment	Lack of Control	0.59	231.41	(1,158)	p<.01	0.44	-0.70	p<.01
Lack of Control	EduBusiness	0.24	49.92	(1,159)	p<.01	-0.09	0.41	p<.01
Lack of Control	Business Influence	0.67	328.59	(1,164)	p<.01	-0.08	1.00	p<.01

Regressing Business Influences on Buffering/Fulfilment. A simple linear regression was calculated to predict the Business Influences measure based on participants' Buffering/Fulfilment measure. A significant regression equation was found $F(1,148)=140.38$, $p<.01$ with an R^2 of 0.49. Participants' predicted Business Influence measure is 0.35+ -0.60. Their Business Influence measure decreases 0.60 for every logit increase in Buffering/Fulfilment measure. The buffering and fulfilment measures of teachers account for 49% of the variance in their business influence measures. This relationship can be seen in Figure 22.

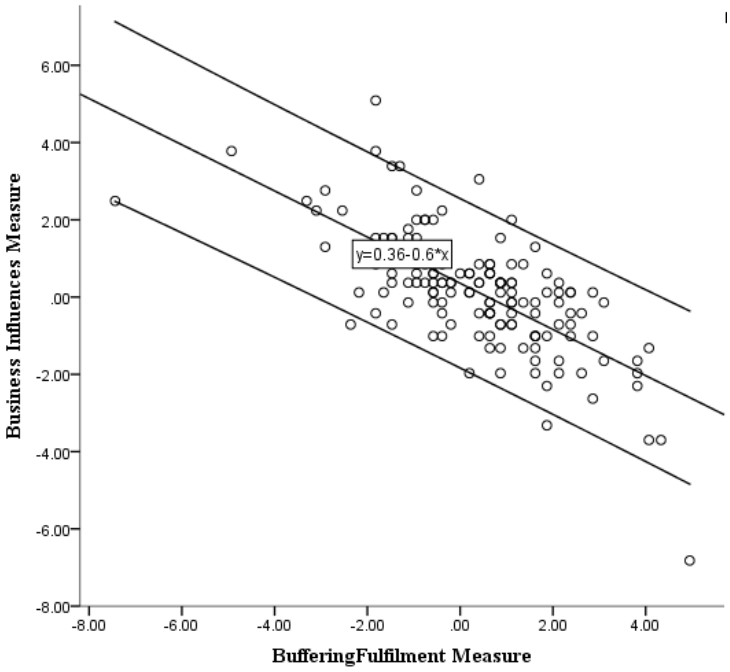


Figure 22. Regression analysis of Business Influences on Buffering/Fulfilment.

Regressing Business Influences on EduBusiness. A simple linear regression was calculated to predict the Business Influences measure based on participants' EduBusiness measure. A significant regression equation was found $F(1,154)=75.71$, $p<.01$ with an R^2 of 0.33. Participants' predicted Business Influence is -0.05 + 0.42. Their Business Influence measure increases 0.42 for every logit increase in

EduBusiness measure. The teachers' Edu-business measures accounts for 33% of their business influences measures. This relationship can be seen in Figure 23.

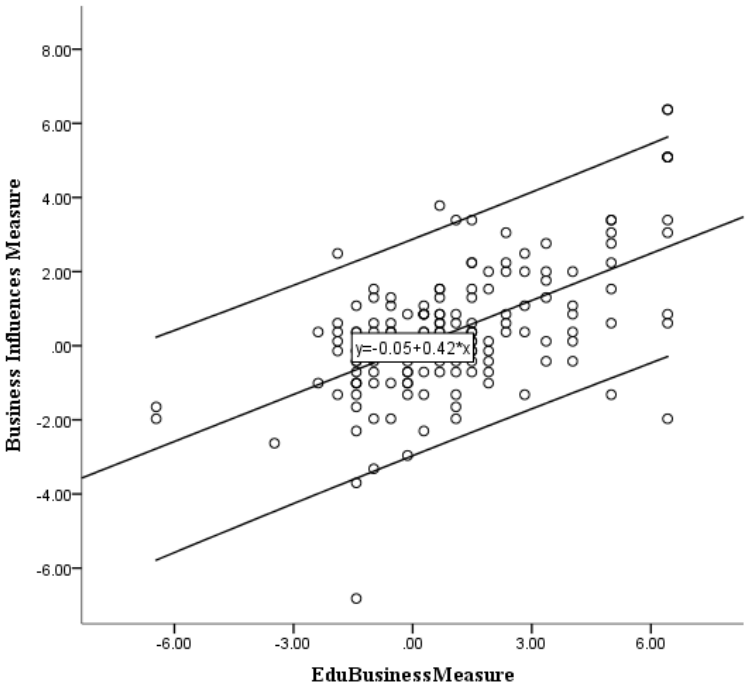


Figure 23. Regression analysis of Business Influences on EduBusiness.

Regressing Buffering/Fulfilment on EduBusiness. A simple linear regression was calculated to predict the Buffering/Fulfilment measure based on participants' EduBusiness measure. A significant regression equation was found $F(1,146)=19.44$, $p<.01$ with an R^2 of 0.12. Participants' predicted Buffering/Fulfilment measure is -.42 + -0.26. Their Buffering/Fulfilment measure decreases 0.26 for every logit increase in EduBusiness measure. The EduBusiness measures of teachers account for 12% of the variance in their Buffering/Fulfilment measures. This relationship can be seen in Figure 24.

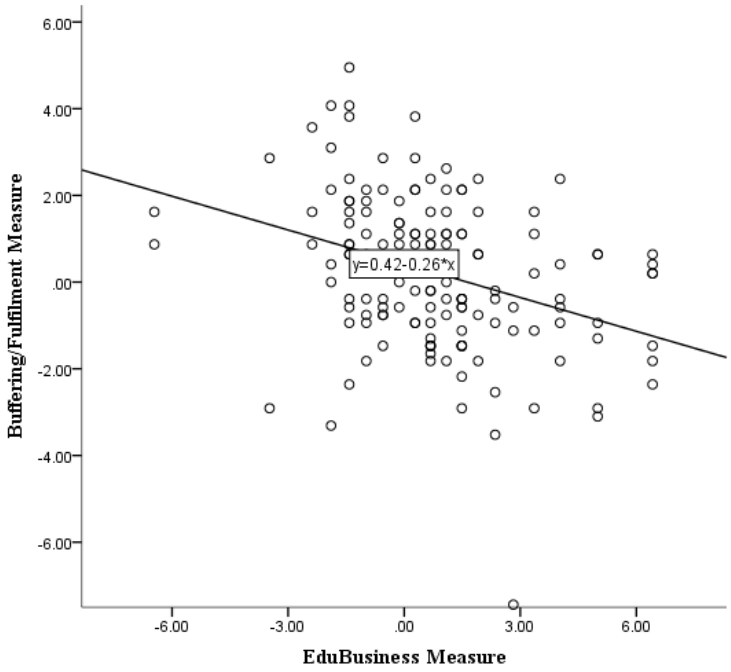


Figure 24. Regression analysis of Buffering/Fulfilment on EduBusiness.

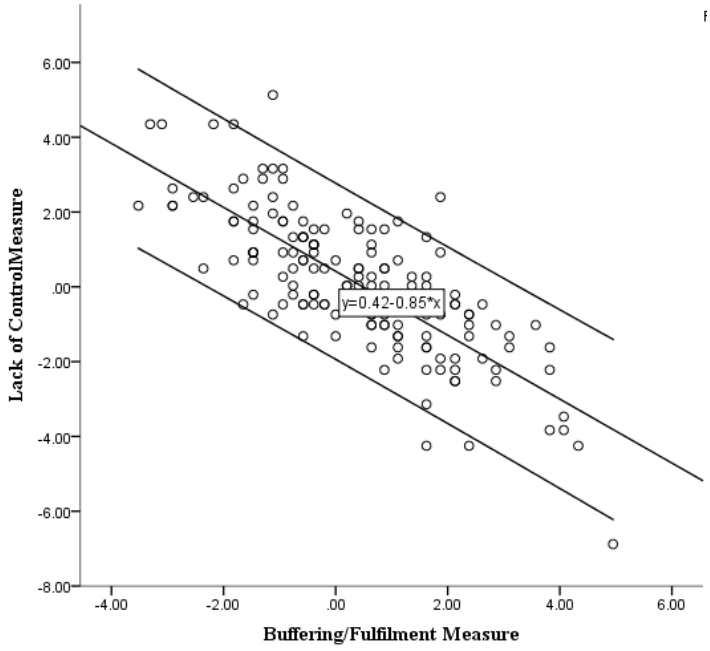


Figure 25. Regression analysis of Lack of Control on Buffering/Fulfilment.

Regressing Lack of Control on Buffering/Fulfilment. A simple linear regression was calculated to predict the Lack of Control measure based on

participants' Buffering/Fulfilment measure. A significant regression equation was found $F(1,158)=231.70$, $p<.01$ with an R^2 of 0.59. Participants' predicted Lack of Control measure is 0.42 + -0.85. Their Lack of Control measure decreases 0.85 for every logit increase in Buffering/Fulfilment measure. The buffering and fulfilment measures of teachers account for 59% of the variance in their Lack of Control measures. This relationship can be seen in Figure 25.

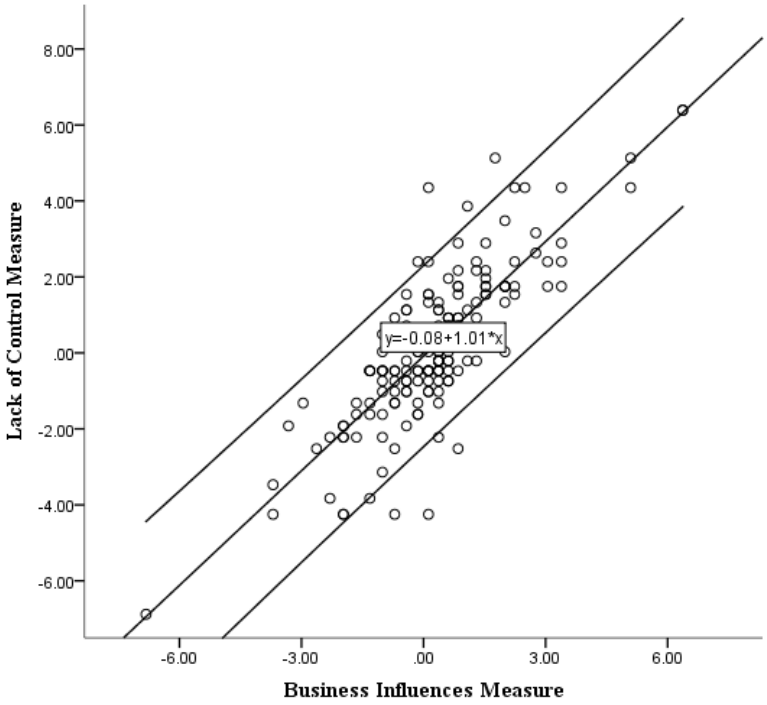


Figure 26. Regression analysis of Lack of Control on Business Influences.

Regressing Lack of Control on Business Influences. A simple linear regression was calculated to predict the Lack of Control measure based on participants' Business Influences measure. A significant regression equation was found $F(1,164)=328.59$, $p<.01$ with an R^2 of 0.67. Participants' predicted Lack of Control measure is -0.08 + 1.00. Their Lack of Control measure increases by 1.00 for every logit increase in Business Influences measure. The teachers' Business Influence

measures account for 67% of the variance in their Lack of Control measures. This relationship can be seen in Figure 26.

Regressing Lack of Control on EduBusiness. A simple linear regression was calculated to predict the Lack of Control measure based on participants' EduBusiness measure. A significant regression equation was found $F(1,159)=49.92$, $p<.01$ with an R^2 of 0.24. Participants' predicted Lack of Control measure is -0.09 + 0.41. Their Lack of Control measure increases by 0.41 for every logit increase in EduBusiness measure. The EduBusiness measures of teachers account for 24% of the variance in their Lack of Control measures. This relationship can be seen in Figure 27.

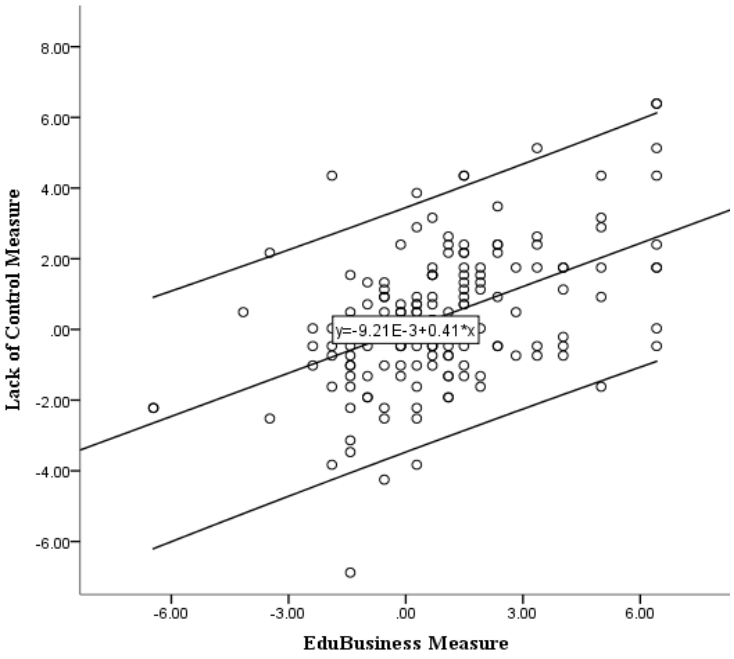


Figure 27. Regression analysis of Lack of Control on EduBusiness.

These linear regressions demonstrate that further analysis was required to find whether these relationships continue to exist when the variables are considered together.

Multiple regression analysis and results. The results of the linear regression analyses were that the four variables demonstrably measure different latent constructs

and yet the measures across a range of participants were found to be related at highly significant levels. Unfortunately, simple linear regression equations do not describe the relationship between all four variables. While moving to multiple regression analysis frames the problem in a more causal way, it was deemed necessary to understand the potential relationships between the four variables.

The highest R^2 result was the Lack of Control measure regressed on the Business Influences measure, so this was used as the starting point. Three models were tested: (1) Lack of Control predicted by Business Influences (2) Lack of Control predicted by Business Influences and Buffering/Fulfilment and (3) Lack of Control predicted by Business Influences, Buffering/Fulfilment and EduBusiness. This order was chosen based on the strength of the simple linear regression analysis results and the predictors were entered through hierarchical, blockwise entry. The analysis excluded missing data list-wise leaving 128 cases. While 128 is significantly fewer than the original 204 participants, it meets the minimum acceptable sample size of [50 + 8*(number of predictors)] which would be at least 82 for this data set and the recommendation of (104+number of predictors) which would be 108 (Green, 1991). The data also generally met the expectations of being independent variables and that each variable was normally distributed. There did not seem to be multicollinearity between the variables as none of the correlations were above 0.90. The variance inflation factor (VIF) was below 2 for all variables when under 10 is considered acceptable, meaning the variables were not highly correlated. From visual inspection of the scatter plot of the regression standardised predicted values against the residuals, the relationship between the residuals in the model seemed to be independent. A histogram of the residuals and the normal probability plot showed a generally normal

distribution of residuals. A summary of the models tested in multiple regression can be found in Table 27 and the results of the models are also described here.

Table 27

Summary of of results for multiple regression analysis on Lack of Control measure (N=128)

	Model 1			Model 2			Model 3		
Variable	B	SE B	β	B	SE B	β	B	SE B	β
Business Influences	0.97	0.07	0.79**	0.63	0.07	0.51**	0.62	0.08	0.50**
Buffering/Fulfilment				-0.48	0.07	-0.42**	-0.48	0.07	-0.43**
EduBusiness							0.01	0.04	0.01
R^2		.63			.86			.86	
F for change in R^2		215.98			46.93**			0.05	

*p<.05, **p<.01
Note: B indicates the unstandardised beta coefficient, β indicates the standardised beta coefficient

Model 1. A multiple linear regression was calculated to predict the Lack of Control measure based on the Business Influences measure of each participant. A significant regression equation was found ($F(1,126)=215.98$, $p<.01$), with an R^2 of .63 meaning 63% of the variance was explained by the predictors. Participants' Lack of Control increased 0.97 for each logit increase of Business Influence.

Model 2. A second multiple linear regression was calculated to predict the Lack of Control measure based on both the Business Influences measure and the Buffering/Fulfilment measure of each participant. A significant equation was found ($F(2,125)=170.82$, $p<.01$), with an R^2 of .73. Participants' Lack of Control increased 0.63 for each logit increase in Business Influences and decreased 0.48 for each logit in Buffering/Fulfilment. Both Business Influences and Buffering/Fulfilment were significant predictors of Lack of Control. The change is R^2 from model 1 to model 2 was highly significant ($F(1,125)=46.93$, $\Delta r=.10$, $p<.01$).

Model 3. A third multiple linear regression was calculated to predict the Lack of Control measure based on the Business Influences measure, Buffering/Fulfilment

measure and EduBusiness measure of each participant. The change is R^2 from model 2 to model 3 was not significant ($F(1,124)=0.05$, $\Delta r=.00$, $p=.82$).

Table 27 demonstrates that the first model, with only Business Influences included as the predictor was significant. The second model was significantly improved in its predictive power but the third model was not. The best model was the second, excluding EduBusiness from the model. While this was an interesting finding, it did not seem to fully explain the data set. Considering that the EduBusiness scale was found to be highly related to other scales in simple linear regression, more investigation was needed. The EduBusiness measure was found to be a significant predictor of the Business Influences measures in particular. Therefore, as Business Influences seemed highly related to Lack of Control, a different model than multiple regression was needed to explore the relationship. Because the β values in multiple regression describe the degree to which each predictor affects the outcome if all other predictors are held constant, taking out the variation may have caused the EduBusiness scale to look like it was not a significant predictor even though it was significantly related to the other scales. In complex scales with significant variation, *holding constant* may not be an acceptable approach to analysis. In feminist analysis, the idea of *holding constant* is seen as theoretically separating the data from the actual variation of experiences of people. For these scales under investigation, holding constant the other variables to find the individual effect of each one does not seem as interesting as finding the pattern of the relationship between them. This led to further analysis through path analysis.

Path Analysis. Path analysis can be used as an extension of multiple regression to look at more complicated relations among the variables (Streiner, 2005). As each of the measures in this investigation were Rasch-calibrated, the measurement

model had already been created and only a structural model was needed to analyse the relationship between the variables. Path analysis was chosen because it could be used to understand the relationship between four observed variables. The strength of path analysis is that variables can act as both predictors of other variables and be predicted by other variables. Where multiple regression constricts variables to being either dependent or independent, a variable can play both roles in path analysis. The path analysis was conducted in SPSS AMOS (Arbuckle, 2014).

Model Development. The first model tested in AMOS was a multiple regression to allow a comparison of models. This was the same model as was analysed in the previous section but was conducted for the purpose of directly comparing it to a competing model. This analysis included only the 128 participants who had no missing measurements.

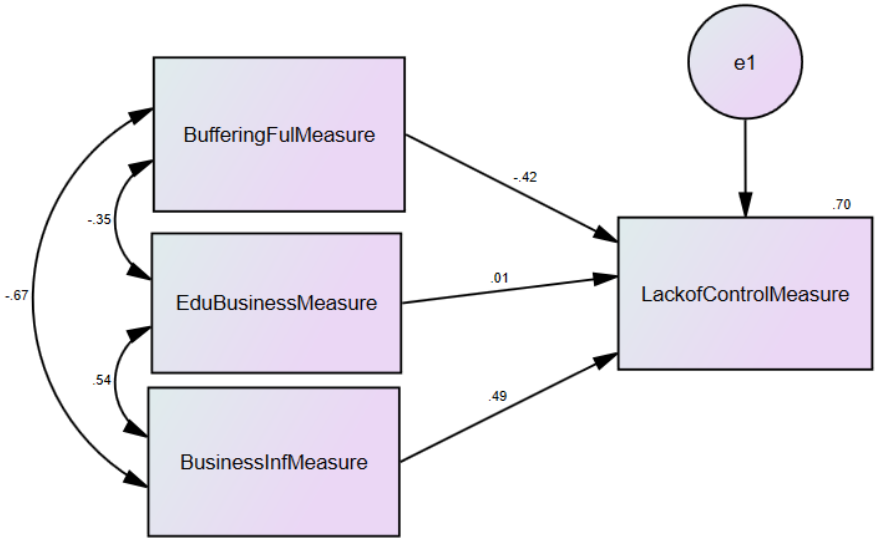


Figure 28. Multiple regression analysis model.

The multiple regression model had good fit and visually demonstrated the significant correlations between the three predictor variables as well as the non-significant relationship between the EduBusiness measure and Lack of Control measure. The model had overall good fit with x^2=1.38, p=.24 meaning that this model

was not significantly similar to the worst fitting model. As demonstrated in Figure 28, the model explained 70% of the variance in the Lack of Control measure with the Buffering and Fulfilment measure significantly predicting the Lack of Control measure (β=-.42, p<.01) and the Business Influences measure significantly predicting the Lack of Control measure also (β=.49, p<.01). The EduBusiness measure was not a significant predictor but the correlations between the three measures were significant at the p<.01 level. As the multiple regression analysis demonstrated that EduBusiness was not a significant predictor of Lack of Control but was a significant predictor of the other variables, further model development was needed. The path analysis model was drawn to show this relationship.

Model assumptions for path analysis. To conduct a robust path analysis, a check of model assumptions was necessary. The results of the Rasch analysis excluded many respondents for each scale. When combining the four scales together, missing data from any one scale excluded a respondent from the analysis. It did not seem appropriate to estimate missing data from the included data as the cases were intentionally excluded in the Rasch analysis. This left 128 cases for path analysis. One case was flagged as an extreme outlier for the Buffering and Fulfilment scale and as an outlier for the Lack of Control scale. Two other cases were identified as outliers for both the Business Influences Scale and the EduBusiness scale and they were removed. This left 125 cases for the analysis. The 125 cases generally met the assumptions for univariate analysis of normality for skew and kurtosis using +/- 2 as the standard (Field, 2000). Looking at the critical ratio accompanying each variable for skew and kurtosis, the EduBusiness measure was found to violate the assumption for kurtosis. This was not surprising as the scale contained the fewest items and had a large variance. While the critical ratio for kurtosis for the EduBusiness measure is

somewhat high, it was not considered high enough to severely influence the overall results, so the scale was retained and used in the path analysis. The tests of normality for each variable can be seen in Table 28.

Table 28

Summary statistics and tests of normality for each variable

Variable	Mean	Variance	Skew	Critical Ratio	Kurtosis	Critical Ratio
EduBusiness	0.71	4.94	0.11	0.48	1.13	2.57
Buffering/Fulfilment	0.33	2.39	0.04	0.20	-0.21	-0.47
Business Influences	0.20	1.54	-0.11	-0.53	0.65	1.49
Lack of Control	0.08	2.75	0.35	1.60	0.48	1.10
Multivariate					3.00	2.42

Path analysis model specifications. The hypothesis for the final path analysis model was that Lack of Control could be predicted by Business Influences and Buffering/Fulfilment, that EduBusiness would predict Business Influences and that Buffering/Fulfilment would moderate the relationship between EduBusiness and Business Influences. This models EduBusiness as an indirect predictor of Lack of Control but not a direct predictor. The correlation matrix used for the analysis is shown in Table 29.

Table 29

Correlation matrix for path analysis variables (N=125)

	1	2	3	4
1. EduBusiness Measure	1			
2. Buffering/Fulfilment Measure	-.31**	1		
3. Business Influences Measure	.51**	-.63**	1	
4. Lack of Control Measure	.40**	-.74**	.75**	1

**correlation is significant at the .01 level.

Identification. The model was overidentified with one degree of freedom. The overidentification is due to the model having five relationships, four measured variables (one exogenous three endogenous) and three error terms. The exogenous variable, error terms and five relationships create an analysis searching for nine pieces

of information. According to the equation k(k+1)/2, with four variables as k, there are ten pieces of information built into the model. This gives the one degree of freedom and overidentification of the model. The analysis was conducted in SPSS AMOS (Arbuckle, 2014) using the maximum likelihood estimation method.

Path analysis results. The path analysis model had good overall fit. The chi-square value was low and not significant with x^2=0.23, p=0.63 with 1 degree of freedom. This means that the model was not significantly similar to the worst fitting model. The root mean square error of approximation (RMSEA) was 0.00 with less than 0.10 considered good and below 0.05 considered very good (Steiger, 1990). The Goodness of Fit Index (GFI) is calculated from the variance and covariance that is accounted for by the model (Byrne, 2016) and the GFI of this model was .99 where greater than 0.95 is considered good. The Normed Fit Index (NFI) was .99 where greater than .90 is good. The Standardised Root mean square residual (SRMR) was calculated to be 0.02 where below 0.08 is considered good. SRMR is the square-root of the difference between sample residuals and model residuals. The pclose value determines whether there is a significant difference between the tested data and a close-fitting data set. Pclose was found to be .68 where greater than .05 is considered non-significant, meaning that there was not a significant difference between this data set and a close-fitting data set. The analysis did not yield any suggestions for model modification. Table 30 presents the standardised and unstandardised regression weights, the standard errors and significance.

Table 30

Path analysis estimates and standard errors

Outcome Variable	Predictor Variable	β	B	S.E.	Significance
Buffering/Fulfilment	Edu Business	-.31	-.22	.06	p<.01
Business Influences	Edu Business	.34	.19	.04	p<.01
Business Influences	Buffering/Fulfilment	-.52	-.42	.05	p<.01
Lack of Control	Business Influences	.47	.63	.09	p<.01
Lack of Control	Buffering/Fulfilment	-.44	-.48	.07	p<.01

The path analysis model created in AMOS is shown in Figure 29. The standardised estimates are included in the figure. The number on the top right-hand corner of each endogenous variable is the squared multiple correlation. This indicates the percent of variance in that variable that explained by the variables that affect it. The Lack of Control measure then had 68% of its variance explained in this model.

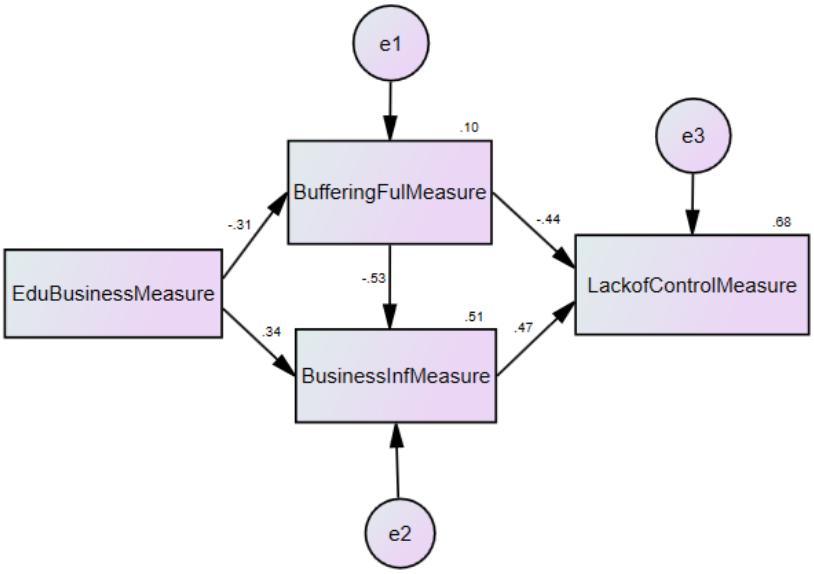


Figure 29. Path diagram with standardised path coefficients and R^2 values for endogenous variables.

Decomposition of effects. The path analysis allows for a decomposition of effects to analyse the direct, indirect and total effects of every variable on the other variables. The analysis of effects can be seen in Table 31. The columns are the predictor variables and the rows are the outcome variables.

Table 31

Path analysis decomposition of effects (standardised effects)

	EduBusiness	Buffering/Fulfilment	Business Influences
Direct Effects			
Buffering/Fulfilment	-.31		
Business Influences	.34	-.52	
Lack of Control		-.44	.47
Indirect Effects			
Buffering/Fulfilment			
Business Influences	.16		
Lack of Control	.38	-.25	
Total Effects			
Buffering/Fulfilment	-.22		
Business Influences	.28	-.42	
Lack of Control	.28	-.74	.63

From the decomposition of effects it is apparent that the EduBusiness measure was found to indirectly affects the Business Influences measure and the Lack of Control measure. The EduBusiness measure was also found to directly affect the Buffering/Fulfilment measure and the Business Influences measure. The Buffering/Fulfilment measure was found to indirectly affect the Lack of Control measure but also directly affects it and the Business Influences measure. The Business Influences measure was found to directly affect the Lack of Control measure only. This decomposition of effects brought together the full analysis to describe the relationship between the variables.

Comparison of Models. The analysis could have concluded with the multiple regression analysis but excluding the EduBusiness measure seemed to oversimplify the story. Because both models were run in SPSS AMOS, a comparison could be conducted of the goodness-of-fit statistics. All the goodness-of-fit statistics improved in the path analysis. While both the multiple regression and path analysis models fit well, the path analysis was found to be a better model than the multiple regression analysis. The difference in fit was not huge, but ceiling effects hinder more

improvement on the multiple regression analysis. The strength of the path analysis model can also be seen as theoretical. The path analysis was found to demonstrate the significance of the EduBusiness measure to other measures in the model while simultaneously acknowledging its limited direct effect on the Lack of Control measure.

Table 32

Multiple regression and path analysis model comparison

Variable	x^2	RMSEA	GFI	NFI	SRMR	Pclose
Multiple Regression	1.385, p=.24	0.05	.99	.99	0.008	.31
Path Analysis Model	0.23, p=.63	0.00	.99	.99	0.02	.68

Interpretation of the results of the path analysis and previous literature. The relationships between the variables demonstrates that teachers are likely to experience fewer feelings of lack of control as they feel more fulfilment in their work and have more buffering from the business-like behaviours of their school. They also more likely to experience business influences in their work the more their school is run as an EduBusiness, but these effects are also dependent on the buffering they have from the business aspects and their feelings of fulfilment in their work. Teachers who experience significant business influences on their work are more likely to feel a lack of control over their work.

The relationships of the EduBusiness scale and Business Influences scales to the other two other scales in this research were best explained with the final path model. While a hypothesised model including a direct relationship from the EduBusiness measure to the Lack of Control measure was acceptable, the best model was the path model using EduBusiness as a predictor of Buffering and Business Influence and only indirectly affecting Lack of Control. This meant that the Buffering and Fulfilment scale took on a kind of mediating relationship between the

EduBusiness scale and the Business Influences scale and a kind of moderating relationship to the Lack of Control Scale from the EduBusiness measure.

The Buffering and Fulfilment scale was found to be integral in the model. While in the multiple regression model, this measure was found to be related to all the other variables, the relationship with the EduBusiness measure was the weakest relationship. Logically this made sense that, while the Buffering and Fulfilment measure may have a negative relationship with the EduBusiness measure, teachers' feelings of buffering and fulfilment seem unlikely to depend directly on the extent to which a school is run as an EduBusiness. A more nuanced understanding was needed. The final path analysis model used the Buffering and Fulfilment scale as a kind of mediator between the EduBusiness measure and the Business Influences measure. This could be interpreted that the extent to which a school was run as an EduBusiness was directly related to the business influences on teachers, but also that teachers' feelings of fulfilment and the buffering they feel may explain that relationship further. Teachers that experience higher amounts of buffering and fulfilment were found to experience less business influences on their work. There are two possible explanations, that teachers with lower business influences feel buffered from them and have more fulfilment or that having more fulfilment in their work and buffering from influence makes a school seem less marketised to teachers. Either of those explanations is equally plausible and the exact mechanism cannot be concluded from this research. However, the design of the Buffering and Fulfilment scale avoided individual self-efficacy items that would act as personal buffers. Instead, the focus was on the interaction of teachers with their work contexts. This mediating relationship demonstrates that the extent to which a school is run as an EduBusiness directly influences the Business Influences on teachers but that the Business

Influences also vary along with the buffering and fulfilment teachers experience in their work.

Analysis of the path analysis results and previous literature. The lack of control scale took on a prominent role in the final path analysis. In the model, the likelihood of having little opportunity to move positions, being easily replaced and the potential of being denied contract renewal was found to increase as business influences on teachers work increased and teachers experienced decreasing amounts of fulfilment or buffering from a school being run as an EduBusiness. The lack of control and insecurity of teachers evident in this scale fits with significant findings about teachers in privatised contexts and teachers. Hilgers (2010) argues that:

> Instability of living conditions increase individualisation, competition, and personal responsibility and force individuals to act and understand themselves as the entrepreneurs of their own destiny. The self is developed and conceived of as an enterprise in a competitive framework that leads individuals to manage themselves in accordance with the logic of the market (p. 258).

The model also fits Ingersoll's (2009) argument that teachers' lack of control is related to the centralisation of decision making and that this relates to increased conflict and teacher disengagement, which seems similar to the fulfilment construct developed in this literature. Ingersoll (2009) states that "the control held by teachers in schools was strongly related to these measures of faculty alienation and engagement" (p. 203). Conflict between market values and professional values, like teachers' control over their work, is noted by Lundsrom and Parding (2010). They found that the marketisation of schools increased the lack of trust in teachers to act autonomously and make their own decisions, leaving teachers to personally negotiate the conflict of responsibility and control. They describe the problem that "teachers' 'affiliation' with the logic of the profession, infused with values such as autonomy and shared knowledge base, certainly stands in contrast with the marketing tasks

emanating from the logic of the market" (Lundstrom & Parding, 2010, p. 8). Previous literature has investigated the relationship of teacher fulfilment and marketisation. In *Global Education Inc* (2012), Ball investigates the multi-faceted ways that for-profit interests have influenced schools and education policymaking. Within this discussion is an analysis of the connection between performativity in marketised education institutions and teachers' perceptions where "collective professional values are displaced by commercial values, and teachers are dispossessed of their expertise and judgment. Collective interests are replaced by competitive relations" (p. 33). While the findings of the path analysis did not prove any causal relationship, teachers who were found to have less business influences on their work also demonstrated less lack of control over their work.

Overall this research demonstrated the patterns related to marketisation of teachers' work and how it interacts with teachers' experiences at work. Reading the literature about the potential gains to be made in education by operating schools more like businesses, it would be easy to imagine that any negative effects are idiosyncratic. Heller-Sahlgren (2014), using the term *privatisation*, highlights the idiosyncrasies of side effects that "poorly designed privatisations cannot be expected to yield strongly positive outcomes (p. 197) and that "it is clear, however, that there is very little evidence of any *negative* effects of privatisation" (p. 205). The nuance of the patterns of marketisation for teachers across contexts, types of schools and other factors have demonstrated a range of effects on teachers within a model of the different kinds of influences on their work.

A teacher's story of the relationship between the scales. An example of the connection between these different scales was illustrated in the interviews. Debra

(Participant 4-C-SA) told stories that elaborated the connections between the items of each scale and the scales overall.

Debra is a white woman from Australia who did her teacher training in England and had worked in business prior to teaching in public and private schools. Her teaching experience includes working at a private school in London and two different for-profit international schools before she took the position in South East Asia working for Company C. Her current job was working in primary school as a classroom teacher, but she had been an administrator previously and, at the time of the interview, was in the process of moving to an administrative position in another school. Debra described the circumstances that led her to leave a school with colleagues she adored and students she enjoyed. She also told about suffering serious mental health issues and physical health problems that she felt were directly connected with the problems she encountered in her work.

Debra's story began with her feelings of accountability in her job, how pressure for test scores was transmitted through the school to the teachers, her questioning the amount of testing and the consequences she suffered for it. She described a recent push for the school to be data driven. Her perception was that the company wanted to use their test score to create a brand and to sell the idea of the school to investors. As a teacher, Debra felt that she was constantly testing students and she eventually questioned the value of so much assessment with her immediate supervising administrator. She acknowledged that this administrator was under pressure to meet specific performance targets with the teachers, but she felt that the administrator "had lost focus of the kids and all she could see were the numbers". Debra believed the data was being changed so that it fit certain targets. When she asked her administrator why certain students were not being counted in the data she

was told "'they're outliers, we don't need to worry about them'". Debra felt she was "expected to achieve unrealistic improvement" and the job of teacher at this school put her and other teachers in the position of being "100% more accountable than you've ever been in your life". She felt that the "pressures on teachers are enormous" and she connected it with parent pressure that teachers had to meet the "level of expectation of parents because of the money they are paying". Debra described her influence over decision making that "your place in the pecking order is fairly low as a teacher". She was brought into a meeting with her administrator "after questioning the ethics of testing kids every two weeks and says she was told "'no more toxic questions, I want you to be more positive than anyone else in the school'". Debra felt the administrators at her school blamed the teachers for what did not work and that the administrators in her school protected each other or were protected by the company to maintain an image of stability of the organisation. In her perception, the administrators were "in self-preservation mode and that makes you [the administrators] behave in a different way". Debra stated that the administrators seemed to act in their own self-interest, would take sides and get other staff members to align with their ideas forming coalitions. This story fit the items of the Business Influences scale, connecting teachers' lack of influence in the hierarchy, pressure to prove learning has occurred, parent influence and administrators working to prove themselves.

Debra described elements of the EduBusiness scale. She used the term *CEOs* for the school management and spoke about a visit to her school by "multi-national, alienated CEOs" who she felt were out of touch with the school. She reflected on her own training in business which led her to expect that a school could be successfully run on a business model. Debra described that she felt running a school on a business

model should work because if good services met the needs of students, a good school would be the outcome. She stated, "at the heart of me, I think it should work, but it doesn't seem to". Debra felt that the business model did not work because "when you run a school as a business, the focus on data is detrimental to the health of the teachers and [well-being of] the students". She described the fast growth of the school and the importance placed on marketing to increase the number of students in the school. She felt that her low level in the hierarchy as a teacher was particularly lower than the marketing department, feeling that the school was "essentially run by the marketing".

Overall, Debra demonstrated few of the items on the Buffering/Fulfilment Scale and told stories of negative versions of many of those items. Through her stories she described how she felt disconnected from the humanity of her students and the purpose in her work. She described how she felt that her job was transformed into describing students as numbers with the side effect of "taking the stories out of everyone's lives". Debra explained that the influences on her work that "business disconnects teachers from understanding kids as human beings". She described her negative reaction to assessment with feelings of being forced to focus on numbers was because "business needs numbers, teachers don't need numbers". She described rebelling against marketing who wanted her to send more pictures of her students, but she replied by saying that she was too busy working with students. Debra felt like the "subculture of the school" was to say yes to what her administrators told her to do and then shut her door ignoring their requests and instead doing what she knew was best. She did not demonstrate much fulfilment in her work through choosing her work, demonstrating her capabilities or enjoying the feeling of being valued by other staff members. She described how she felt that her actions were not supported that, when she questioned about testing, another administrator "said she would stand up for me,

[but] she never did". Debra described it feeling like being "under the spotlight without anyone standing up for you". Through extensive testing and data goals, she felt she experienced being forced to take part in activities, especially those related to testing. While she generally did not demonstrate the items in the Buffering/Fulfilment scale, she did mention that she felt her superintendent was doing a good job considering the "ridiculous" amount of pressure from the upper management of the company. Considering her stories about her supervising administrator, it seems that the buffering of the superintendent did not extent to her even though she could see it occurring in the school overall.

Debra's feelings of lack of control over her work fit many of the items in the Lack of Control Scale. With a high amount of business influence in her work, her working at a school run as an EduBusiness and her low levels of buffering and fulfilment, for her stories to elaborate the overall pattern of the relationship between the scales, she would be expected to demonstrate high amounts of lack of control. While she did not speak directly to the items about 'playing the game' or befriending administrators, her stories of being punished for questioning the assessment practices of the school demonstrate that she did not gain favouritism or recognition in those ways. Debra described how she felt teachers were "bonded labour" because the pay, contract and personal situations of teachers made it difficult to leave. When she reported for her first day of work, her teaching assignment, pay and job expectations were immediately changed. Debra stated that she felt like "the stakes are really high if you question" because she saw teachers who she respected lose their jobs. She had noticed that the school had experienced remarkably high turnover the previous two years.

Debra's story of friction with her immediate supervising administrator had another layer to it. When she was brought in to discuss her questioning of the assessment policy, she was put on a "professional plan". She was told her goals would be *integrity* and *professionalism*. In her own telling of this story, she felt like those two goals were chosen because they were unmeasurable and could be used to keep her in her place. Her immediate supervisor seemed to feel threatened but held the power to curtail continued questioning by increasing her feelings of precarity in her job. The administrator told her that the superintendent was upset with her and did not like her, so she felt like she could not discuss her problems with other higher level administrators. Through her friendships at the school, her story eventually made it to the superintendent who then approached her to ask if she felt bullied. Debra felt that the superintendent had never actually been upset with her but had figured out what was occurring. All these elements added to her feelings of tension at work, not being valued and being expected to follow direction without questioning. While Debra's story does not fit every scale exactly, her stories elaborate how the relationship between the scales would look in a teacher's life and give a context to how these items would be experienced.

Demographic information related to the findings. In this research, there are several demographics issues that should be considered. While Mokken scale analysis and Rasch analysis are not dependent on a representative sample, it is worthwhile to compare the sample of all respondents to those who were excluded from each scale and to those who were included in the path analysis.

Misfit demographics comparison. The analysis of each scale uncovered many respondents that did not fit the pattern of the scale. This means that their overall ability did not increase and decrease along with the difficulty of the items for that

scale. While measurements could have been recorded for each of these participants, the error of their measurement was large enough that it was detrimental to the measurement properties of the scale. The decision was made to balance the measurement of individuals and the quality of the scale. This means that, in practice, many individuals were excluded from each scale, who are sometimes referred to as *misfits*. These individuals were excluded to avoid assigning a measurement with measurement error so large that the person measure was not a true reflection of the latent variable for that person.

Unfortunately, many respondents were excluded from each scale and it is possible that there are underlying patterns to why respondents fit poorly on each scale. To discover if there were any patterns to the reasons that respondents did not fit the scale, and consequently, if bias was added into the scale, a simple demographic analysis was done to compare the characteristics of the respondents who fit and misfit. A comparison of the demographics of the misfit respondents against all respondents can be seen in Table 33. Overall, Table 33 demonstrates that the misfit respondents were demographically very similar to respondents who were included in the analysis. While the misfit group was sometimes statistically significantly different from the included group, it was most different when the number of misfit respondents was very small.

Path analysis demographics. The path analysis could only be conducted with data that had no missing values across all four variables. The final analysis included 125 of the original 204 responses. Table 34 compares the demographics of the respondents included in the path analysis with those included in the full data collection. Comparing the percentage of each demographic, the sample is broadly similar to the overall response pool.

Table 33

Misfit demographics versus demographics for all respondents

	All 204 responses	Buff/Ful Misfits (36)	Business Influences Misfits (27)	EduBus Misfits (28)	Lack of Control Misfits (20)
Gender					
Female	111 (54%)	19 (53%)	13 (48%)	12 (43%)	9 (45%)
Male	93 (46%)	17 (47%)	14 (52%)	16 (57%)	11 (55%)
Years teaching					
1-2	19 (9%)	3 (8%)	2 (7%)	4 (14%)	2 (10%)
3-6	60 (29%)	8 (22%)	10 (37%)	8 (29%)	7 (35%)
7-13	71 (35%)	13 (36%)	7 (26%)	10 (36%)	9 (45%)
14+	54 (26%)	12 (33%)	8 (30%)	6 (21%)	2 (10%)
Level of students taught					
Early childhood/primary	74 (36%)	15 (42%)	12 (44%)	13 (46%)	10 (50%)
Secondary	122 (60%)	20 (56%)	13 (48%)	15 (54%)	10 (50%)
Other	8 (4%)	1 (3%)	2 (7%)	0 (0%)	0 (0%)
School size in number of students					
Fewer than 500	71 (35%)	14 (39%)	12 (44%)	11 (39%)	4 (20%)
500-999	60 (29%)	9 (25%)	7 (26%)	11 (39%)	4 (20%)
1000-1999	52 (25%)	9 (25%)	7 (26%)	4 (14%)	7 (35%)
2000+	20 (10%)	4 (11%)	1 (4%)	2 (7%)	4 (20%)
School type					
Government/Public	49 (24%)	6 (17%)	7 (27%)	6 (22%)	3 (16%)
Private non-profit	62 (31%)	13 (37%)	10 (38%)	6 (22%)	5 (42%)
Private for-profit, small	49 (24%)	14 (40%)	8 (31%)	10 (37%)	11 (55%)
Private for-profit, medium or large	41 (20%)	2 (6%)	1 (4%)	5 (19%)	0 (0%)
School profit status					
All non-profits	111 (54%)	19 (52%)	17 (63%)	12 (43%)	8 (42%)
For-profit	92 (45%)	17 (47%)	10 (37%)	16 (57%)	11 (58%)
International status					
National teacher	35 (17%)	7 (19%)	3 (11%)	3 (11%)	14 (70%)
International teacher	169 (83%)	29 (81%)	24 (89%)	25 (89%)	6 (30%)
Position					
Full time	172 (84%)	30 (83%)	25 (93%)	24 (86%)	18 (90%)
Part time/Job share	5 (2%)	1 (3%)	0 (0%)	0 (0%)	0 (0%)
Lead/Head	16 (8%)	4 (11%)	1 (3.5%)	2 (7%)	1 (5%)
Substitute/Relief	1 (.5%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Trainee/Student	1 (.5%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Library, Literacy, Tech coach Counsellor or other	7 (4%)	1 (3%)	1 (3.5%)	2 (7%)	1 (5%)

Note: Three respondents did not answer for school type and one did not respond for school size or profit status. Percentage values were rounded to the nearest whole number.

Table 34

Demographics for respondents included in path analysis versus all respondents

Gender	125 responses	All 204 responses
Female	72 (58%)	111 (54%)
Male	53 (42%)	93 (46%)
Years teaching		
1-2	11 (9%)	19 (9%)
3-6	37 (30%)	60 (29%)
7-13	44 (35%)	71 (35%)
14+	33 (26%)	54 (26%)
Level of students taught		
Early childhood/primary	44 (35%)	74 (36%)
Secondary	76 (61%)	122 (60%)
Other	5 (4%)	8 (4%)
School size in number of students		
Fewer than 500	41 (33%)	71 (35%)
500-999	36 (28%)	60 (29%)
1000-1999	35 (28%)	52 (25%)
2000+	13 (10%)	20 (10%)
School type		
Government/Public	33 (26%)	49 (24%)
Private non-profit	34 (27%)	62 (31%)
Private for-profit, small	24 (19%)	49 (24%)
Private for-profit, medium or large	33 (26%)	41 (20%)
School profit status		
All non-profits (public and private)	67 (54%)	111 (54%)
For-profit	58 (46%)	92 (45%)
International status		
National teacher	23 (18%)	35 (17%)
International teacher	102 (82%)	169 (83%)
Position		
Full time teacher	105 (84%)	172 (84%)
Part time/Job share teacher	4 (3%)	5 (2%)
Lead Teacher/Head of…	9 (7%)	16 (8%)
Substitute/Relief Teacher	1 (1%)	1 (.5%)
Teacher Trainee/Student Teacher	1 (1%)	1 (.5%)
Library, Literacy, Tech coach Counsellor or other teacher	5 (4%)	7 (4%)

Note: Three respondents did not answer for school type and one did not respond for school size or profit status. Percentage values were rounded to the nearest whole number.

Chapter 5: Summary and Conclusions

This research set out to explore the influences of marketisation of schools on teachers by using a scale construction approach to understand the patterns of their perceptions of their work. This research has investigated the experiences of teachers working in the most marketised contexts, schools run by large multi-national for-profit education management organisations and, through a questionnaire completed by teachers working in a variety of schools, has identified a relationship between how business influences relate to teachers' feelings of control and fulfilment. In this concluding chapter I will summarise the key findings of the research of the patterns of marketisation of schools evident in teachers' work. I will describe what I consider to be the main contributions of this research, reflect on the limitations of the investigation and discuss potential further research that this study reveals. Finally, I will revisit my story that introduced this piece of work and discuss how undertaking this research has allowed me to make more sense of the issues that prompted this investigation.

Summary of Key Findings

The key findings of this research are related to the five research questions. The research questions were formed and refined throughout the process of the methods. For this section, the four themes that emerged from the interviews are discussed, then connected to the final scales aligned with the research questions and the results of the quantitative analysis.

Marketisation. The most prominent theme of the interviews was teachers' experiences of schools operating in ways typical of corporations working in a market, which was labelled *marketisation*. In the analysis of the interview data, the theme was created through teachers' stories of feelings of competition, performativity, and

insecurity based on inequalities at schools. The depoliticisation of the work was evident where educational goals were displaced by goals of increasing school enrolment, marketing a specific image of the school, or remodelling school operations to business-like practices.

In the quantitative analysis this theme split into two scales, one of direct influence of a school being run like an EduBusiness, a profit-making education enterprise, and the other of the business influences on teachers. The direct influences of marketisation scale was defined by the items as a school being run on a business model with workers who used business-related language, a heavy focus on increasing enrolment in the school, and financial earnings of the school benefiting the school ownership. The indirect influence of marketisation was found to be business influences including practices of changing the school based on parent influence, the behaviour of school administrators acting to prove themselves or further their careers, and hierarchy in the school which manifest in the comparison of teachers and teachers' feelings of being put into competition.

Control. Teachers' feelings of control over their work was another prominent theme. In the analysis of the interview data, participants' stories of decision making in the schools demonstrated how teachers had little input into school policy or the use of resources, time and finances. Teachers were sensitive to how decisions led to the intensification of their work and described how teachers' experience and judgment were not valued, especially in how promotions within the school were handled.

In the quantitative analysis, both control and lack of control constructs were developed and tested. The lack of control scale was found to be a clearer pattern and the scale also encompassed some items that were initially conceived as part of the marketisation construct. Teachers' feelings of tension between staff members were

found to be connected with feelings of being easily replaceable and the potential of being denied contract renewal. Items from the marketisation construct about teachers' contracts, blame and responsibility that the teachers felt, and favouritism for certain teachers, especially those who *play the game* were related to other feelings of a lack of control.

Buffering. Another significant theme was buffering. Teachers identified parts of their work that were influenced by the business aspects of the company but did not affect their teaching because of buffering. Teachers shared that they did not feel the business aspects of their work or said that they didn't feel affected by the company. They also described the ways leadership allowed teachers to show their individuality and independence, even in companies that promoted conformity and consistency. Teachers who experienced buffering stated how they felt treated professionally, even while their company promoted a culture of micromanagement. Teachers described how they experienced the business aspects of their work were not transmitted through the company. For example, when teachers felt that school administrators treated their staff well even when they were under pressure from higher levels of management, the participants experienced buffering from the full effect of the school being run as a business. Some interview participants noticed changes in buffering. For example, when one company was taken over by a different education management organisation and in several instances when school administrators changed, the amount of buffering teachers felt from the business influences of the school also changed. The interaction of the company, the school leadership and how that translated to teachers was frequently discussed in the interviews. The buffering construct combined with the fulfilment construct to create a single scale.

Fulfilment. The final major theme was teachers' feelings of fulfilment in their work. When asked about their teaching, participants discussed feelings of personal fulfilment through their success with students. They would often relate their own fulfilment to students' successes and described fulfilment through their relationships with their colleagues. The participants discussed feelings of fulfilment through being able to demonstrate competence in their own work as well as feelings of autonomy in being trusted to make decisions about their work.

In the quantitative analysis, the fulfilment items combined into the same scale as the buffering items. In the pilot, the two scales were administered separately so the pattern was not visible until the final analysis. The fulfilment items alone created a moderately scalable set of items but were further strengthened by the inclusion of the buffering items. The analysis demonstrated the connection between recognition and support of teachers; teachers' feelings of autonomy, competence and relatedness; and buffering from the business influences of the school. Teachers' feelings of being shielded from parent pressure and the business aspects of the school were found to be related to their own feelings of being able to demonstrate their competence as a teacher, feeling related to their colleagues and feeling like valued members of the school community. In the pilot of the fulfilment construct, the items related to teachers' feelings about the success of their students were included in the scale, but due to the entirely positive response, those items were excluded because they did not measure the construct with any discrimination.

Relationship between the scales. The final path analysis, using measures from the Business Influences scale, the EduBusiness scale and the Buffering and Fulfilment scale as predictors of teachers' Lack of Control measure was found to be the best model to explain the relationship between the scales. The path analysis model

included all the significant predictors of Lack of Control and explained 68% of the variance in the outcome variable. The final model (shown again in Figure 30) included teachers' feelings of buffering and fulfilment as a mediator between the EduBusiness measure and the Business Influences measure. This meant that teachers feelings of fulfilment and buffering were found to be related to lower feelings of business influences on teachers' work, even as a school was run increasingly as an EduBusiness. While the extent to which the school is run as a business was found to have an impact, it was mediated by teachers' feelings fulfilment and buffering. As fulfilment decreased and business influences increased, the feeling of a lack of control also increased. The story of these findings is that teachers' experiences in schools are influenced by marketisation, the context of the school and how teachers experience that context.

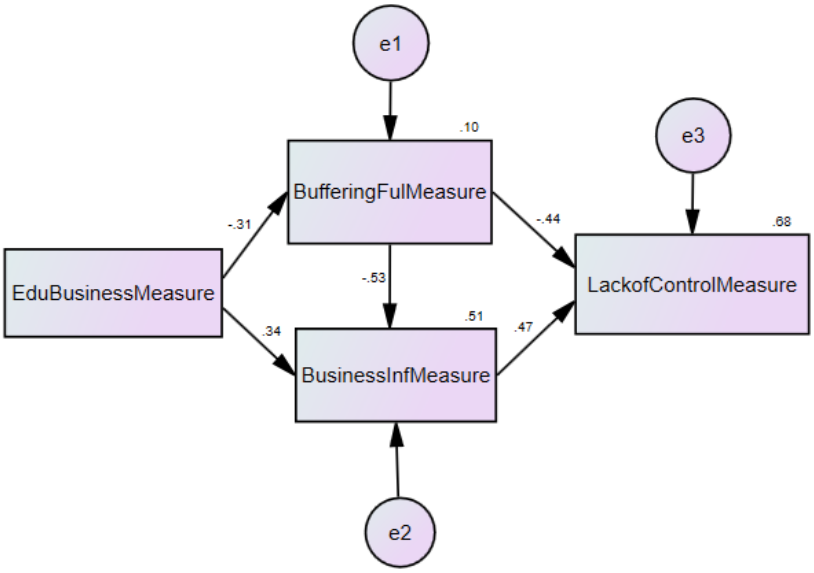


Figure 30. Final path analysis model demonstrating the relationship between the scales

Significance of the Study

The aim of this research was to understand the experiences of teachers working in marketised contexts through the process of scale construction. Through conducting interviews, analysis of teachers' stories, construct development, item analysis and the creation of measurement models, the experiences of teachers in marketised contexts have been explored. In this section, I present what I consider to be the two main significant contributions to knowledge of this research: improved understanding of teachers' experiences in marketised school contexts and the development and use of feminist mixed-method scale construction.

Patterns of teachers' experience of their work in marketised contexts. This research develops a new model through which we can understand teachers' experiences of their work in marketised contexts. This study demonstrates that, if we want to truly understand how marketised contexts affect teachers' work, we need to take into account the four main constructs developed in this research: the extent to which teachers perceive their school as being run as an EduBusiness, the business influences on their work, their feelings of lack of control, and the buffering and fulfilment that they feel in their work. Within each of these constructs, a pattern was found which reflected a range of experiences of teachers and these patterns were strong enough to create scales. While each individual scale was interesting (see the discussion in the opening to this chapter), the relationship between the scales is a key contribution to how we discuss teachers' experiences in marketised contexts.

Overall this research demonstrates that the pattern between these constructs is crucial and this study contributes a nuanced understanding of the interactions of the four scales as seen in Figure 30. As was explored in Chapter 4, the simple linear relationships between the scales are interesting but perhaps oversimplified. The

positive relationship between a school being run as an EduBusiness and the business influences on teachers makes sense and the negative relationship between teachers' feelings of fulfilment and their perception of a lack of control seems sound. Unfortunately, these simplistic relationships obscure the more complex experiences of teachers.

Limiting an analysis to only two variables—like finding the relationship between the influences on teachers and the extent to which their school is run as an EduBusiness—may miss that the business influences on teachers' work are mediated by their feelings of fulfilment and buffering from the marketised aspects of their work. Focusing only on teachers' feelings of fulfilment may fail to understand that their fulfilment is significantly related to the business influences on their work, especially as the school is run increasingly as an EduBusiness. This research contributes a new model for viewing the experiences of teachers as a complex relationship between the different experiences of the context of a school as seen in Figure 30. This model acknowledges the unique experiences of each teacher, is non-deterministic and demonstrates a strong pattern.

Using this model to integrate teachers' perceptions of the business influences on their work, the buffering and fulfilment they feel, the lack of control they feel over their work and the extent to which they feel their school is run as an EduBusiness allows a unique insight into the complex experiences of teachers in schools. This investigation demonstrates that teachers' experiences of work cannot be viewed as distinct from the context of how their school is operated. The individual experiences are nuanced and varied but fit a larger pattern of how the marketisation of schools can affect teachers. This pattern, while based on individual perceptions, has no scale that should not be considered akin to self-efficacy, personality, or individualised emotion.

Instead, it demonstrates that teachers have a wide variety of experiences, but the pattern transcends individual characteristics. The pattern is maintained across types of schools, different teacher positions in the schools, gender, national or international teachers, and whether a teacher works in a primary or secondary school. This model of the pattern between these scales contributes insights into teachers' experiences in marketised contexts with understanding beyond previous research on this topic.

Developing a feminist mixed-method approach. The primary contribution of this research is understanding how teachers experience marketised contexts. In addressing this issue, I have also developed a distinctive approach to scale development that locates a mixed methods research design within a feminist epistemology. I believe that this research design provides a significant new way to analyse teachers' experiences. This understanding may allow a new voice into the conversation when debate about the involvement of markets in education "has settled into ritual" (Finkelstein & Grubb, 2000, p. 602).

The main criticism of mixed-methods research is that forcing paradigmatically incompatible methods together may reduce the quality of research (Sale, Lohfeld and Brazil, 2002). The potential solution is to combine methods based on a larger overriding principle that frames the epistemology (Sandelowski, 2002). For this research, a feminist approach was chosen to unify the mix of methods. Due to the predominance in belief that markets and the "commodification of everything" (Ball, 2004) can solve problems as well as the comparative dominance of pro-market voices (Apple, 2000), the feminist perspective was deemed necessary. The feminist framing counters assumptions about marketisation with an epistemological perspective that considers teachers as knowledgeable and perceptions and lived experiences as knowledge. The feminist approach questions assumptions of research by developing

new methods grounded in the lived experiences of people who are unlikely to be heard unless sought out.

The integration of quantitative analysis methods into feminist critical research is a new and developing field (Williams, 2012). In this research, the feminist stance was used to seriously examine "the very questions posed and the methods used to answer them, basic assumptions about methodology, criteria of validity and merit" (Gross, 1986, p. 192) realising that a transformation was necessary for this topic. Gross (1986) describes problems that occur when researchers continue to use old practices of research to analyse new situations. She argues that using data about marginalised groups with methods that are not intended to be critical can advance stereotypes or hidden biases. This results in an outcome that may exclude knowledge because of its origins. Instead, she advocates for beginning at the lived experiences of interesting groups, especially including women, to develop new methods and understanding. In this research, the feminist perspective allowed the production of connected knowledge, grounded in the lived experiences and social world of participants while using quantitative analysis methods.

Through several stages of data collection, generation and analysis, teachers' experiences and their perceptions were integrated into the process to increase the explanatory power of the data. More than a mix of qualitative and quantitative data, this research was an integration of multiple experiences that resulted in quantitative findings. This research contributes an example of how a carefully chosen integration of methods based on specific principles can yield "qualitatively meaningful and quantitatively precise measurement framework" (Fisher & Stenner, 2011, p. 89). The approach leads to a new perspective and has the potential to meet the expectations of both quantitative researchers and feminist critical scholars.

The feminist mixed-methods approach may contribute a new voice to the conversation about markets and education. The prevalence of objectivist approaches to research about teacher effectiveness, judging teachers on students' assessment or teachers' evaluation results communicates that teachers can only be understood reliably by non- teachers. Significant sociological literature about teachers has been based on understanding teachers' work by observing and judging teachers, policies about improving education have focused on how to push teachers to increase students' test scores, and narrow quantitative analysis (like the OECD's TALIS) have investigated teachers' work but allowed only limited responses from teachers. The discussion about the ways that markets can be used to improve schools often treats teachers as passive actors. In research about the potential benefits of the marketisation of school and for-profit schools, only a partial picture has been obtained because teachers have been left out of the discussion (Mahoney, Hextall & Menter, 2004). Unfortunately, this partial picture is also intensely focused on questions that are dominated by business-like aspects of efficiency, profitability or students' results (Marginson, 1999). Competition is promoted as the way to ensure schools and teachers improve, but the research advocating for competitive behaviour lacks teachers' experiences of it (e.g., Hoxby, 2002). Embedded within that discussion is the assumption that business leaders can talk authoritatively about education and that teachers' perceptions do not merit consideration. Excluding certain knowledge or knowers leads to loops where new understanding is intentionally omitted or disqualified (Morley, 2016). When debate is stuck with market advocates emphasising the benefits of competition, parental choice, accountability or increase in test scores and critics countering with problems of inequality, commodification of social world

and fraud (Finkelstein & Grubb, 2000), the arguments fail to clash where constructive discussion can occur.

However, conducting feminist mixed-methods research potentially bring a new voice with quantitative impact to the debate about the marketisation of schools. The feminist perspective in this research contributes a new perspective, no longer simply accepting the voice of markets as true (Ball, 2018) or that teachers' perceptions can be excluded. The methods combine impartial-seeming numbers necessary for speaking to policy audiences (Westmarland, 2001) with the feminist approach to valuing the lived experiences of teachers in schools. While objectivist approaches seem to distrust teachers' perceptions and define teachers' work without questioning how the teachers experience it, the focus in this research was a commitment to "pay attention to what is missing" (DeVault, 1999, p. 208). Bringing a feminist perspective to research about teachers' work means focusing on the lived experiences of people in a specific context that has been previously left out of the discussion. This research demonstrates that teachers' perceptions of their work do not yield only idiosyncratic or non-generalisable subjective data. Teachers are knowledgeable about their experiences and perceptive of their context. Teachers' experiences can form themes, constructs and larger patterns that add a new dimension to discussing teachers' work. Research into schools that disregards teachers' experiences is omitting a key component of understanding the context of the school. The feminist approach to methods in this study creates new knowledge that challenges that there are the only two sides of to the argument. The result of this approach is a pattern of lived experiences that transcend the individual, subjective or idiosyncratic experience and illuminate the social world of teachers, contributing a set of methods

for using teachers' own accounts of their work to understand the larger patterns of teachers' experiences of marketised contexts.

Limitations of the Research

The limits of each stage of the methods were described in Chapter 3. The main limitations due to methods were based on how participants were chosen and the usefulness of the data analysis methods of each stage. For the overall investigation, the limitations related to the *universe of items* and the design of the items merit discussion.

The most prominent limitation worth considering is related to how the analysis was used to produce constructs. For this research, it is difficult to prove that an entire universe of items was created and sampled from to choose items. While specific curricular areas or well-studied medical fields may have significant existing research that feeds into measuring outcomes, fields with less previous research have a very fuzzy universe from which to sample items. In this research, the universe was unknown, defined throughout the stages of research and, therefore, was impossible to randomly sample. Even in developed fields, a dogmatic approach to random sampling of a universe may be assumed acceptable due to the illusion that content validity can come before construct validity (Fisher, 1991). The construct validity of this research contributes to evidence that these scales were well-constructed even without a known universe of items. Although it may be considered a limit to this research, this investigation is part of a developing field that needs significantly more advancement before the content area can be specified as a universe of items.

While there is good evidence that the scales reflect teachers' patterns of experiences, each scale had respondents who did not fit the scales. It would be

illogical to assume all the misfit was due to teacher responses rather than item design. There are a few examples where item design was less than ideal. The Lack of Control scale includes two items about previous experience that were developed separately but combined into the same scale. Some items ask about the personal experience of the teacher ("I…") and others ask about the context of the school for teachers ("Teachers at this school…"). Unfortunately, this demonstrates imperfection in the item design process and that the guide I set for item design was not applied consistently. However, the fact that two similar items were retained in the same scale demonstrates the consistency of teachers in perceiving and reporting their experiences. That items reporting individual experiences and perceptions about the context for all teachers in a school were in the same scale demonstrates that those perceptions are likely related.

There are several aspects of the research that could have been approached differently. Delimiting the interviews to teachers working in schools run by for-profit education management organisations was the logical choice to understand these highly marketised contexts but may have limited the stories for the final use of stories to elaborate the quantitative data with teachers' stories. While the scales measure consistently for teachers across private and public schools, they may be missing some items that would have indicated the construct in another less-marketised context. The stories of teachers in public or non-profit schools may have aided in contextualising the data because potentially a wider range of interview subjects would have yielded a teacher's story that could have contextualised the Buffering and Fulfilment scale. Delimiting the data collection to one point in time for the interviews and for the questionnaire limited the research to a static moment. This means that no claims can be made about how schools transform when the marketisation of a school changes.

If I were to undertake this research again, I would gather more responses to the questionnaire so the data could be split in half for analysis. Half of the responses would have been used the create the scales and the other half to validate the scales. My goal of 200 responses was intended to be suitable for conducting Mokken scale analysis, Rasch analysis and path analysis. Unfortunately, it was not enough cases to split the data in half and still conduct two separate robust analyses.

Reflections for Future Research

As well as answering questions, this research generates important questions for future research and further investigation should look critically and in-depth into the specifics of some of the issues raised here. For example, teachers' feelings of control over their work could be an entire investigation on its own. As a main theme of the interviews and robust scale in the findings, further research is warranted. While significant other research has been done about teachers' feelings of control, it was not obvious until the final analysis that the theme of a lack of control would be such a prominent element of this research. Further research could also investigate if these scales are robust enough to track changes in teachers' perceptions and experiences during a change in school management or ownership.

Many issues were prevalent in the interviews but could not be fully developed in this research. An interesting element in the interviews was the division between internationally and locally hired teachers which has been previously studied by Tarc and Mishra Tarc (2015) and Canterford (2003). Similarly, inequalities in gendered organisations seemed an interesting aspect, similar to what has been noted by Martin and Collinson (2002) but could not be fully developed in this research. There were also stories in the interviews that fit with Mies (1986) discussion of how multi-

national companies profit through exploitation of women, especially women from developing nations. This was evident in the interviews with teaching assistants but was not often mentioned by internationally hired teachers. The item describing the social divide between staff members demonstrated item bias as it was easier for private and international teachers to endorse than public and national teachers. While this item was initially included as part of the Business Influences scale, it was removed during differential item functioning (DIF) analysis. It is possible that the item would have been retained if more teaching assistants had been included in the final quantitative data collection. Due to the sites chosen for the final quantitative data collection, no teaching assistants were in the final sample. The participants in the final data collection were likely similarly unaware of the problems affecting teaching assistants as some of the interview participants were. Other items designed to discuss problems of the interaction of gender and status, national original and position in the school that teaching assistants face did not scale together with other items. However, this may be due to this lack of knowledge by the full-time internationally hired teachers and because many national teachers were included in the sample. It seems unlikely that the items were excluded because the patterns don't exist. Unfortunately, from the interviews, it seems that many of the problems that teaching assistants and locally hired teachers encounter working in multi-national education management organisations would demonstrate some of the most intense effects of marketisation. Due to methods used in this research, it was not possible to explore these issues to the extent that they deserve. Teaching assistants and part-time teachers were not enough of the final sample to generalise to their experiences, even if the patterns may be similar and these teachers were part of the interviews and pilot studies. Further research would look specifically into the experiences of teaching assistants, the

disparities between internationally and locally hired teachers and the lack of knowledge of teachers in the *centre* about the experiences of teachers at the *edge* (hooks, 2000) in marketised contexts.

With a feminist approach to methods, this research had a significant focus on women but was not conducted as a comparative study of women's experience versus men's experiences. Difference studies are commonly cited by feminist researchers as exaggerating between-group differences when within-group differences are likely larger (Sprague, 2016). Some comparison was done in this research with differential item functioning (DIF) analysis. DIF analysis of the Buffering and Fulfilment scale found that items about being included in social groups at the school, a collaborative school culture and feelings of teachers being there for each other were easier for women to endorse than men. On the other hand, easier for male teachers was the item about superiors allowing the respondent input into school decisions. These items seem to describe the gendered nature of school organisations, demonstrating that there were some significant differences in how male and female teachers experienced their school context. While comparison did not seem pertinent for this investigation, future research about marketised contexts should gather other data specifically related to gender or the gendered nature of the organisation, for example: How many women in each school were managed by a woman? How many people on the schools' leadership teams had previously been primary teachers? What was the difference in experience between male leaders and female leaders? How many women in the school had more experience than their male leaders? In the interviews, these issues were discussed by respondents but were not suitable for the questionnaire. A deeper examination of the specific issues of gender, the interaction with the subject taught and how it relates to

teachers' promotions within marketised schools would be an excellent path of further study.

There is significant potential for future research with this combination of methods and for advancing feminist quantitative methods. This investigation demonstrated the potential of beginning scale construction at the experiences of participants. The mix of methods is suitable for feminist research and could be further developed to widespread use as a feminist quantitative approach in multiple fields. While Rasch measurement was initially designed for analysing educational data and has seen a remarkable increased in use in journal publications since 1990 (Panayides, Robinson & Tymms, 2015), Rasch analysis and Mokken scale analysis have not been used widely for large-scale analysis of experiences, especially not teachers' experiences. The translation of teachers' own stories through qualitative analysis and scale development is a style of data generation and analysis that fits well with the theory of Rasch measurement. Further research by critical and feminist researchers, about teachers' or other group's experiences in specific contexts using this mixture of qualitative methods, Mokken scale analysis and Rasch analysis could build on the example set in this work.

Personal Reflections

As a final point of summary to bookend this piece of research, I feel I should bring back my own experiences that I discussed in the introduction. Can this research truly be a feminist piece of work if I leave out an analysis of my own story? My professional experience led to my choice of methods and the decision to treat teachers as the most knowledgeable about their experiences. Similarly, my own perceptions about the marketisation of the school I worked in and its effect on my work may be

worth discussion. Considering the findings of this research, I look back at my own experiences teaching in a for-profit school run by a large education management organisation.

Compared to the scales, I feel like I worked in a school that would have led me to endorse all the items on the EduBusiness scale, where there were incredible business influences on my work and, although I felt significant fulfilment in my work, I would not have been able to endorse the buffering items. I recognise that most of the items in the Lack of Control scale were present in my work.

When I reflect on my own experiences, I can see one very clear story of my own that illustrates the pattern found in this research. At the very beginning of my time at a large school run by an international for-profit education management organisation, the grading system at the school and the timing of reports became an instant collision between my professional values and market values. From my previous teaching experience, I knew that sending reports eight weeks into a school year with grades based on undefined criteria was a poor idea with no pedagogical merit. I discussed with my head of subject how problematic it felt to assess students so early in the school year, especially in a creative subject. The grading criteria I inherited seemed inappropriate, unrelated to the expectations I had for students in the class and were logistically difficult to complete for 700 students I had just met and had likely seen in the classroom only 5 to 6 times before grades were due to be reported. My concerns were met with accusations of being bad at my job, unprofessional for questioning my head of subject's curricular decisions, being unwilling to fulfil the assessment requirements of my position and demonstrating little commitment to teaching because I seemed resistant to proving learning had occurred. The problem then escalated to my principal and the issues grew larger. I realise now

that, my principal, who was closer to the business influences of the school, provided very little buffering from those influences affecting me. My principal likely felt that I was disregarding hierarchy, criticising systems that other people had designed, and generally not *playing the game.* I understand now that my actions of making decisions based on previous experience and resisting forces of accountability were subversive of what was professionally required in a marketised school. When business influences are high, accuracy and professionalism in reports probably seemed less important than proving that the school was delivering an education. Even worse, my pointing out the deficiencies in the educational quality was unacceptable when the school's and the administrators' images could potentially be damaged.

While I had felt I was working in the interests of students, being honest and open about the difficulties of the job and upholding professional values around grades, in such a marketised environment, my behaviour was unacceptable in the context. Demanding control over my work, autonomy in decision-making and judgment about the applicability of grades likely seemed unprofessional. As a teacher willing to work in a marketised context, but not willing to be subject to business influences on my work, I did not achieve the expectations of my work that likely seemed obvious to my superiors and invisible to me. After this incident, my enjoyment of my work plummeted as I believed the accounts of myself as not worthy of the school, a poorly chosen hire or an unprofessional teacher. My head of subject was engaging in behaviour undermining me to my co-workers, treating me as an inexperienced subordinate, wrestling control away from me at every opportunity and using supervisory responsibilities in a punitive way. While the head of subject may have thought this was acceptable behaviour in the competitive environment of an elite school, I experienced it as unprofessional bullying. My head of subject's personal

friendship with my principal slowed action to remedy the problems but eventually my head of subject's actions were punished. However, while the problem was somewhat resolved, the school never felt comfortable and I resigned from doing work I loved.

When I look back, through the lens of this research, I see that my experiences were not individual. The feelings of not being able to succeed in my work and perceptions that the purpose of the work was altered were likely part of a larger pattern. I see it is not surprising that I had felt a loss of meaning in my work and loss of control over my immediate circumstances. With the kinds of business influences that were on my work, the context of the marketised environment and the conflict between professional judgment and market-based worthiness, it was probably doomed to end that way. These were feelings of having little buffering from the business influences and were likely connected to the how much my school was run as a EduBusiness. I realise now that the actions of my head of subject and administrator fit a pattern that I was not aware of but was evident in this research. My head of subject, administrator and head of school were likely working as business managers, concerned about their own careers. The head of school and administrator both left mid-contract and my head of subject resigned past the deadline. Perhaps if I had understood these dynamics, I would not have felt the problems so personally.

I realise now how many other teachers at the same school may have had similar experiences. While each teachers' experiences will be different, this research found patterns to how teachers experience their work. Perhaps the difference between me and other teachers was that I had little buffering from business influences where they may have had supervisors who took care to shield teachers from those aspects of the school. The other problem may have been that I did not accept my lack of control over the situation. I had opted out of *playing the game* and decided not to *take it* any

longer. Many people with similar experiences continued to work at the school, but it seems likely that they relinquished control over their situation. I look back, wondering how they coped, and I remember my interview participants. Perhaps my former colleagues were like my participants, feeling like Reem, that if they didn't complain, they could keep their job, hoping to have more control or input in the future. Maybe like the teachers who reported feeling buffering, my colleagues felt protected by an administrator who could keep the influence of the business out of their work. Perhaps like Sona, they felt that if they worked hard enough, that other people would recognise their work and they would eventually feel valued. I can see how difficult the balance is. Like Debra experienced, when your job feels insecure, work feels out of control, but you hope for future improvements, at that point, silencing your own voice seems worth it. Unfortunately, in my situation I did not stay quiet. I gave up my job instead of my voice.

While my own experience changed my life, when I look back, I realise that I was only one casualty of many. I probably did not hear about other teachers who encountered similar or worse issues. In my own experience and in the stories of the teachers I interviewed, teachers feeling high levels of business influences on their work may not realise that the problems are systemic. If we ignore what teachers say about their work or do not seek out teachers' perceptions, we will not see the patterns that occur in schools. Teachers will leave the profession assuming they were the problem rather than the system. They may assume that their feelings are not part of a larger pattern and think that removing themselves will solve the problem. I hope what is gained from this research is an understanding that, if we can listen to teachers' perceptions about their work, we can see the patterns of their experiences and make more informed decisions in the future. For teachers struggling to maintain a balance

between the influences on them and fulfilment in their work, perhaps recognising themselves in these patterns will create possibilities for positive action. Understanding the interplay between these experiences may lead a teacher to demand change in their work environment rather than leave a difficult school situation. On these scales, where teachers are found to have lower levels of business influences on their work with buffering from business influences and higher levels of fulfilment in their work, they experience less lack of control. It is not simply an individual characteristic or directly related to the school type but is potentially changeable so that teachers can feel workplace conditions can improve. I hope that integrating teachers' own stories demonstrates that these patterns happen to people who care deeply about their work and their students and, most importantly, that teachers' experiences of work matter.

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Appendix

Appendix A – Ethics Approval



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Our **Ref: 2017/48**

Dear Emily Winchip

Thank you for forwarding further information regarding the continuation of your research project beyond the pilot stage:

Teachers' Experiences in For-Profit Schools -- survey stage (large scale)

I have looked at your submission and note:

- The new ethics application form identifies there are gatekeepers involved. You have supplied further information about this in an email to me dated 21/12/16.
- You have supplied copies of the research instrument which will be kept on file with your previous application documents.

Based on the above assessment, it is deemed your research is:

- **Approved**

We wish you well with your research.

Dr Kay Fuller
Chair of School of Education Ethics Committee

Appendix B – Interview Request Text

Hello, thanks for adding me on LinkedIn!

I am writing to you in connection with a research project I am undertaking about teachers. The study is investigating the experiences of teachers working within for-profit international schools.

I will be interviewing teachers from many different backgrounds about the experience of working in schools. Your help would be greatly appreciated. Our interview can be set up for about 45 minutes to an hour via Skype or another video chat platform. This can occur on any date that works for you any time before August 10.

The interviews will be recorded and I will keep notes, but your identity will remain anonymous. My aim is to listen to the voices that are often not heard within schools and your voice would be an excellent addition toward understanding the depth and breadth of experiences.

If you are willing to be interviewed, please respond to this message or follow this link: https://nottingham.onlinesurveys.ac.uk/response-to-interview-request-online to a secure platform to provide me with your preferred date of interview and a way to contact you.

The research project has been approved by the University of Nottingham, School of Education Ethics Committee. All information will be treated as confidential and you may withdraw your participation at any point up to the completion of the interview. If you have any questions about this process, don't hesitate to contact me on LinkedIn or email me at emily.winchip@nottingham.ac.uk.

Thanks, Emily Winchip

Appendix C – Interview Schedule

- What is your current position at the school?
- Tell me about your teaching history
    - Tell me about being a teacher
    - Tell me about your work
    - How did you come to work for this school?
    - What is your future as a teacher?
- What are your experiences of working as a teacher?
    - What are your experiences of working in this school?
    - Describe a typical day
    - What are your favourite/least favourite parts of your work?
    - What factors have led you to re-sign or resign?
- What are your professional responsibilities?
    - What purpose do you serve at your current school?
    - Give an example of a time when you felt like you got to do the "real work" of teaching.
    - What parts of your work go unseen?
- What kind of structures or procedures are in place at your school that affect you?
    - How is professional development structured at the school?
    - How is teacher evaluation structured at the school?
    - What is the approach to testing or evaluating students?
- This is a for-profit school. Can you tell me about your experience of working in this sector?
    - What are your attitudes to for-profit education in general terms?
    - In what ways does being for-profit impact on you and how you do your job?
    - Does it make a difference to your work or to the school?
- In what ways is your voice heard or not heard within your school community?
- What can you do if you disagree with practices in your school? Can you tell a story about having done that?

- What kind of hierarchy or power structures exist that affect you?
- What ways do you see cooperation or competition occurring in the school?

- What is the ethos of the school staff?
- Is the school settled and "humming", constant change, push ahead. . .?
- Are there any systemic problems that exist in your school? Where do they come from? How are they solved? Who is responsible for solving them?

Appendix D – Participant Information Letter

Research Aims: The aim of this research is to investigate the experiences of teachers working in for-profit schools. Your involvement would be a single in-person interview lasting approximately 45 minutes to an hour. This research will give a better understanding of the unique world of international school teachers and the range of experiences in schools.

Confidentiality: If you participate in this research, everything you say will be treated as confidential information. Only personal information directly related to the research will be collected. Any personal information obtained will be kept confidential and will not be disclosed to third parties. The confidentiality of participants will be maintained by using identifying codes to correspond to the individual so that you cannot be identified as having participated in this research. Your name will not appear on any documents and all information about your workplace or location will be anonymised to protect your confidentiality.

Data Use: The data from the interviews will be used only for purposes related to this research. The interviews will be recorded, and I will take notes during the interview. These files will be kept locked and will be saved with a code and kept separate of any information that could be used to identify participants. This data will be used generally, in conjunction with the findings of other interviews, to create items for a survey which will be distributed in 2017. In the case that specific statements or quotes from this data are used in my dissertation or in later publications, your name will not be used, and your anonymity will be maintained and neither your location nor company will be disclosed so that you remain unidentifiable. The personal data will be destroyed when it is no longer needed, and the research data will be retained for 7 years in line with the UoN Code of Research Conduct and Research Ethics (2015). Possible publications are likely to be made after the study is completed, whereby the identity of the participants will remain anonymous and confidential. Should you wish to withdraw from this research you can do so at any time up until the completion of the interview.

Voluntary Participation: Participation in the research is completely voluntary and you are free to withdraw at any time up to the conclusion of our interview without prejudice or negative consequences.

Risks, Harms and Benefits: Due to the reflective nature of interviews, there is a potential that discussing past experiences may bring to the surface uncomfortable or unhappy memories. There is some risk that sensitive personal information will be discussed. The potential benefits are a deeper insight into the experiences of teachers, especially the voices that are not always heard or are ignored.

Contacts:
Principal investigator:
Emily Winchip
[contact information provided in original]

PhD Supervisor:
Professor Howard Stevenson
[contact information provided in original]

If you wish to make a complaint based on ethical grounds, please contact the University of Nottingham, School of Education Research Ethics Coordinator
educationresearchethics@nottingham.ac.uk

Appendix E – Participant Consent Form

I have read the Participant Information Sheet and the nature and purpose of the research project has been explained to me. I understand and agree to take part in the project "Understanding the Experiences of Teachers in For-Profit Schools"

- I have been informed of and understand the purposes of the study
- I have been given an opportunity to ask questions
- I understand I can withdraw from the research project up until the conclusion of our interview and that this will not affect my status now or in the future.
- I understand that while information gained during the study may be published, I will not be identified, and my personal information will remain confidential.
- I understand that I may decline to answer any question for any reason or in the interest of upholding my contractual obligations to my employer.
- I understand that all data collected will be stored with hard copy data in locked filing cabinets and electronic data (including audio files) on a password protected computer with access only given to the researcher
- I understand that I may contact the researcher or supervisor if I require further information about the research, and that I may contact the Research Ethics Coordinator of the School of Education, University of Nottingham, if I wish to make a complaint relating to my involvement in the research.
- I understand that I will be audio recorded during the interview.

☐ Tick here if you do not wish to be audio recorded.
In this case, the interviewer will only take notes.

_____
Name of Participant

_____
Signature

Appendix F – Participant Debrief Letter

Thank you for taking part in my research. It is very important that the voices of classroom teachers are heard and that the experiences of teachers are understood.

The aims of this study were to gather information about the experiences of teachers in for-profit schools and the ways that teachers are influenced by the for-profit nature of the school. It is important that this is investigated by speaking directly to teachers, rather than teachers being spoken for by others.

The information that you have shared with me will be held anonymously. This is done so that it will be impossible for people to know what you have told me.

If you have any questions after we have finished, please do not hesitate to contact me:

Emily Winchip
[Contact information provided in original, including local phone numbers]

If you are anyone you work with has witnessed practices that are illegal or unethical, please contact your local regulatory body for private education:
[INFORMATION PROVIDED HERE SPECIFIC TO THE PARTICIPANT'S CITY]

If you or anyone you know is experiences high levels of work-related stress, please contact local mental health professionals:
[INFORMATION PROVIDED HERE SPECIFIC TO THE PARTICIPANT'S CITY]

Appendix G – Pre-pilot Participant Reminder Letter

Hello . . . . . , I look forward to meeting with you tomorrow. . . . . at . . . . . .

Just so you know what to expect, the purpose of this meeting will be a trial of the questionnaire I am developing. My hope is to find problems with the questions before it is administered to a large group of teachers. I will have you fill out the questionnaire while I watch and take notes. Although I want you to answer honestly, I am not interested in your answers but in the process that you go through to decipher the question and choose an answer. By watching you read through the questions, I will be able to tell which questions are not clear, need to be reworded, or need to be deleted. I will have you "think aloud" through the questions and then I will ask you to tell me what seemed confusing or unclear in the questionnaire. If you allow me to record the screen while you take the questionnaire, I will keep it only if I need to see your reaction to a question again and it will be deleted as soon as I have reviewed it.

Your identity will remain confidential and no data from your questionnaire will be retained. If you have any questions, please feel free to ask and I look forward to our meeting.

Thanks!

Emily Winchip

Appendix H – TSTI think-aloud protocol script

Information read to participants: Just so you know what to expect, the purpose of this meeting will be a trial of the questionnaire I am developing. My hope is to find problems with the questions before it is administered to a large group of teachers. I will have you fill out the questionnaire while I watch and take notes. Although I want you to answer honestly, I am not interested in your answers but in the process that you go through to decipher the question and choose an answer. By watching you read through the questions, I will be able to tell which questions are not clear, need to be reworded, or need to be deleted. I will have you "think aloud" through the questions and then I will ask you to tell me what seemed confusing or unclear in the questionnaire. If you allow me to record the screen while you take the questionnaire, I will keep it only if I need to see your reaction to a question again and it will be deleted as soon as I have reviewed it.

Think aloud exercise instructions: Just talk through what you are doing to start the questionnaire – talk about what you think, which choices you make, and how you decide

If there are silences: "**Please say aloud what you think"**

Follow up questions:
"You stopped for a while there, what did you think?" (Shouldn't be their new thoughts – but what thoughts they had at that moment. Don't ask them to reconsider, ask them to tell more about their original thought, their first reaction)

Final questions:

- Request that respondents explain how they got to an answer
- Ask how they paraphrased something (acknowledge that it is just opinion, they don't have to change it)
- Ask if they have suggestions for changes in wording, layout, construction, length etc
- SUBSTANTIVE QUESTION – Ask what their experience is with the "business influence" in their work and how well this captured that – ask to describe it in their own words

Appendix I – TSTI Protocol Example

Item	Skip	Wording	Compre	Memory	Judge	Intent	Details
"you are being invited"		x					"you have been invited"
"the research will give"		x					"the findings of this research"
"the patterns of experiences"		x					"their patterns of experiences"
"level of agreement"						x	take out following statements
EXAMPLE						x	
PAGE 1 of 8						x	get rid of these
enrolls as many students as possible							….but not full,
Business language				x			hard to "strongly disagree" -- maybe put frequently at the beginning
"school finances"				x			MAKE MORE INTENSE
"customer services"				x			BAD customer service?
"The school"						x	"my school"
"staff members"			x				"Teaching staff"
"courses"			x				"curriculum"
"doesn't submit to pressure"						x	DOES NOT
"business orientation"						x	mindset -- "business mindedness"
Nature of the group			x				Large "Group"

Appendix J – Thematic Analysis Example

Excerpt from interview with Participant 5-C-SA with codable moments underlined and the assigned code labelling each moment.

Wants a voice

5CSA: I've had enough of... Partly my motivation to speak to you is because I've actually had enough of working for a non-profit . . .a for-profit school.

WINCHIP: What is it about the for-profit that bothers you?

Hierarchy

5CSA: Ummmm…. Its two things. I think there's a disconnect between the management of the school and the commun . . . school community. Ummmm, I think that there's a

Financialization

misallocation of resources. And I think what motivates the financial managers of the school is not necessarily education, it's, it's obviously income. And so, prioritization is

Financialization

given to things like marketing, ummmm admissions, high . . .high enrolment. . . ummmm, no screening of potential uh, student admissions. Very little screening. And if

Decision making

screening is done, it seems to be . . . ummm tokenistic with teachers having very little, very little input into ummmm, allocation of resources. And I find that very frustrating.

Loss of voice

And I also feel like, you, I've, you feel powerless and you don't feel like you have a voice in terms of major decision making. There's also the issue around contracting. So, because you work . . . in don't know if its [LOCATION] or because we

Insecurity

work for this company, ummmm . . . your contract is basically worth nothing. So, ummm, you know, you sign a 12-month contract and the last, the final clause in the contract is that this contract is subject to change at any point, uhh, at the discretion of

the employer. Which basically makes your contract useless. And there's, there's no
Insecurity
union representation. So, you don't have, you don't really have, you're not represented in any way. You feel quite powerless to do anything. People feel like they can't complain about things because – not, that I'm a complainer. Most teachers are quite . . . I think teachers who work in an international setting tend to be quite forward-minded and change-orientated anyway. But I think that when the pedagogy and educational, contemporary, uh, research-based teaching practice is, comes second fiddle to getting– we call it 'bums in seats' in Australia – which means, you know, bringing people into the school. Then teachers have a problem with that. And they feel, they
Hierarchy ***Buffering***
feel and I have felt, very undervalued – not by my direct line-managers or my teaching colleague leaders. So, I'd say there's two, two, there's leaders and managers. And I feel
Decision making
like the teaching leaders are at our school are almost powerless make positive changes and allocate resources.

Appendix K – Complete item design history

Table 35

Buffering construct development

Initial Conceptualization	TSTI Result	2nd version	Pilot Result	3rd version	Final Result
The school truly wants to find out what doesn't work	Modified	Administrators encourage critical discussion of the purpose of the school	Retained- Buffering Scale	Administrators encourage critical discussion of the purpose of the school	Removed - DIF Non-profit/For-profit, DIF Public/Private
The purpose of meetings is to root out problems	Modified	Meetings are truly a collaborative effort between teachers and administration	Retained- Buffering Scale	Meetings are truly a collaborative effort between teachers and administration	Retained - Buffering/Fulfilment Scale
Meetings are rarely just convincing staff to just come together to agree	Removed				
Teachers are not expected to have a business mindset	Modified	Teachers DO NOT need to have a business mind to thrive at this school	Modified (lower performing)	Teachers can thrive at the school without a business mentality	Removed - low performing item
Teachers can be idealistic about the school	Modified	Teachers can be idealistic about working at the school	Retained- Buffering Scale	Teachers can be idealistic about working at the school	Removed - did not scale
Teachers do not need a "thick skin" to work here	Retained	Teachers do not need a "thick skin" to work here	Modified	Teachers DO NOT need a "thick skin" to work at the schools	Removed - did not scale
Teachers are not just an extension of the business	Modified	Teachers ARE NOT influenced by the business of the school	Modified	The financial situation of the school DOES NOT influence teachers	
The school does not always follow the mandates of the school's managing group	Modified	Administrators can veto the mandates of the school's managing group	Retained- Buffering Scale	Administrators can veto the mandates of the school's managing group	Removed - low performing item
The financial goals of the school are not important	Modified	The financial goals of the school ARE NOT shared with teachers	Removed - Did not scale, Mokken		
The school fosters dissenting voices	Modified	Administrators encourage dissenting voices	Removed - Did not scale, Mokken		
School administration doesn't give in to parent pressure	Modified	School administration DOES NOT submit to parent pressure	Retained- Buffering Scale	School administration DOES NOT submit to parent pressure	Removed - low performing item
The school's administration shields the teachers from being pressured by the managing group	Modified	The school's administration shields the teachers from being pressured by the managing group (governing board, an agency, a trust, a company, or a corporation)	Retained- Buffering Scale	The school's administration shields the teachers from being pressured by the managing group (governing board, an agency, a trust, a company, or a corporation)	Retained - Buffering/Fulfilment Scale
	Added	Teachers truly feel that they are serving a worthy cause	Retained- Buffering Scale	Teachers truly feel that they are serving a worthy cause	Retained - Buffering/Fulfilment Scale
			Added	School administration shields teachers from being pressured by parents	Retained - Buffering/Fulfilment Scale

Table 36

Fulfilment construct development Part 1

Initial Conceptualization	TSTI Result	2nd version	Pilot Result	3rd version	Final Result
Competence (fit with job professionally)					
I feel competent in my job	Retained	I feel competent in my job	Removed - Lower performing item		
I know I am able to execute my job properly	Retained	I know I am able to execute my job properly	Removed - Lower performing item		
I am good at the things I do in my job	Retained	I am good at the things I do in my job	Removed - Lower performing item		
When I am at work, I feel competent to achieve my goals	Retained	When I am at work, I feel competent to achieve my goals	Removed - Lower performing item		
I really master my tasks at my job	Removed				
I have the feeling I can even accomplish the most difficult tasks at work	Retained	I have the feeling I can even accomplish the most difficult tasks at work	Removed - Lower performing item		
Relatedness of Competence					
My contributions are recognized	Modified	My contributions at work are recognized	Retained	My contributions at work are recognized	Retained - Buffering/Fulfilment Scale
The organisation makes me feel important as a colleague/member of staff/worker	Modified	The school makes me feel important as a member of staff	Retained	The school makes me feel important as a member of staff	Removed - DIF for Level
Others demonstrate that my work is valued	Modified	Other people demonstrate to me that my work is valued	Retained	Other people demonstrate to me that my work is valued	Retained - Buffering/Fulfilment Scale
Recently I received recognition of my work	Removed				
The company shows that they value employees	Modified	The board/governors/owners of the school show that they value teachers	Retained	The board/governors/owners of the school show that they value teachers	Retained - Buffering/Fulfilment Scale
Relatedness					
I feel like I can relate to the other people at my job	Retained	I feel like I can relate to the other people at my job	Retained	I feel like I can relate to the other people at my job	Retained - Buffering/Fulfilment Scale
At work, I feel part of a group	Removed				
Teachers are there for each other	Retained	Teachers are there for each other	Retained	Teachers are there for each other	Removed - DIF for Gender
The school has a culture of shared responsibility for school issues	Retained	The school has a culture of shared responsibility for school issues	Retained	The school has a culture of shared responsibility for school issues	Retained - Buffering/Fulfilment Scale
I feel included in the group I want to belong to at work	Retained	I feel included in the group I want to belong to at work	Retained	I feel included in the group I want to belong to at work	Removed - DIF for Gender
There is a collaborative school culture which is characterized by mutual support	Retained	There is a collaborative school culture which is characterized by mutual support	Retained	There is a collaborative school culture which is characterized by mutual support	Removed - DIF for Gender, Private/Public
A team spirit pervades all ranks in this company	Modified	There is a team spirit through all ranks in this school	Retained	There is a team spirit through all ranks in this school	Removed - DIF for Private/Public
The bond between our company and its employees is strong	Modified	The board/governors/owners of the school has strong relationship with the teachers	Modified -grammar	The board/governors/owners of the school have a strong relationship with teachers	Removed - DIF for Private/Public, For-Profit/Non-Profit

Table 37

Fulfilment construct development Part 2

Relatedness to students					
I make a difference in the lives of my students	Retained	I make a difference in the lives of my students	Removed - Lower performing item		
I see that my work has an impact when my students are successful	Modified	I see that my work has an impact when my students are successful	Removed - Lower performing item		
Students gain knowledge because of me	Retained	Students gain knowledge because of me	Removed - Lower performing item		
I am a valuable person to my students (pastoral guide...)	Retained	I am a valuable person to my students	Removed - Lower performing item		
Seeing the students make progress makes it all worth it	Retained	Seeing the students make progress makes it all worth it	Removed - Did not scale		
Autonomy					
I feel free to do my job the way I think it could be best done	Retained	I feel free to do my job the way I think it could be best done	Retained	I feel free to do my job the way I think it could be best done	Retained - Buffering/Fulfilment Scale
The tasks I have to do at work are in line with what I really want to do	Retained	The tasks I have to do at work are in line with what I really want to do	Modified - clarity	The tasks I am required to do are in line with what I really want to do	Removed - DIF for Private/Public
In my job, I am not forced to do things I am uncomfortable with	Retained	In my job, I am not forced to do things I am uncomfortable with	Retained	In my job, I am not forced to do things I am uncomfortable with	Retained - Buffering/Fulfilment Scale
I feel like my decisions at my job reflect what I really want	Retained	I feel like my decisions at my job reflect what I really want	Retained	I feel like my decisions at my job reflect what I really want	Retained - Buffering/Fulfilment Scale
I feel like I have been doing what really interests me in my job	Retained	I feel like I have been doing what really interests me in my job	Retained	I feel like I have been doing what really interests me in my job	Removed - DIF for For-profit/Non-profit
I am involved in the curriculum decision making process before changes are made	Removed				
The school provides staff with opportunities to actively participate in school decisions	Retained	The school provides staff with opportunities to actively participate in school decisions	Retained	The school provides staff with opportunities to actively participate in school decisions	Retained - Buffering/Fulfilment Scale
The administration provides for the formal participation of the faculty in the decision making process	Removed				
The administration provides for the informal participation of the faculty in decision making	Removed				
I am free to express dissenting views to administration without fear of consequences	Retained	I am free to express dissenting views to administration without fear of consequences	Retained	I am free to express dissenting views to administration without fear of consequences	Retained - Buffering/Fulfilment Scale
I am free to express dissenting views to community members without fear of consequences	Removed				
My superiors support my actions	Retained	My superiors support my actions	Retained	My superiors support my actions	Retained - Buffering/Fulfilment Scale
My superiors support my ideas	Retained	My superiors support my ideas	Removed - correlated with "support my actions"		
My superiors allow me input into decision that affect me	Retained	My superiors allow me input into decision that affect me	Modified - grammar	My superiors allow me input into decisions that affect me	Removed - DIF for Gender
			Added	At this school I get a chance to show how capable I am	Retained - Buffering/Fulfilment Scale
			Added	The stress from teaching at this school is worth it	Retained - Buffering/Fulfilment Scale

Table 38

Marketisation construct development Part 1

Initial Conceptualization	TSTI Result	2nd version	Pilot Result	3rd version	Final Result
Internationalization					
The school is managed by a group with a recognizable name	Modified	My school is managed by a group with a recognizable brand name	Removed- Did not scale		
The school is connected with other elite institutions (e.g. Julliard, Ivy League, Cambridge, Oxford, etc.)	Removed				
The school is managed by a group that also manages schools in other countries	Removed				
The school is managed by a group that has investors	Modified	The group that manages my school is influenced by investors	Retained- Mokken Marketisation Scale	The group that manages my school is influenced by investors	Removed - Did not scale
The school is managed by a group that is traded on a stock exchange	Removed				
	Added	The group that manages my school is influenced by other business interests	Removed - Lower performing Marketisation		
	Additional info	"group" was defined as "the school's board, governors, trust, or corporation that makes key decisions about school operations			
Business Language					
The government regulates when the school can raise their tuition/fees	Removed				
The government regulates the school's spending on facilities	Removed				
The school is advertised through marketing campaigns	Modified for enrolment	My school uses advertisement to increase enrolment	Retained- Mokken EduBusiness Scale	My school uses advertisement to increase enrolment	Retained - EduBusiness Scale
Parents are treated as customers	Modified	My school treats parents as customers	Removed - Lower performing Marketisation		
The school implements changes for the purpose of being more competitive	Removed				
The school implements changes for the purpose of tailoring their offerings to the market for schools	Modified	My school implements changes to adapt to school market expectations	Removed - Lower performing Marketisation		
A goal of the school is to demonstrate that parents get their "value for money"	Modified for clarity	My school's finances are often the most important factor for decision-making	Removed- Lower performing Marketisation		
The group that manages the school claims ownership over materials produced by teachers	Removed				

Table 39

Marketisation construct development Part 2

Initial Conceptualization	TSTI Result	2nd version	Pilot Result	3rd version	Final Result
When teachers move away from the school, they cannot take materials they have developed with them to another school	Removed				
School policies are created by employees who do not work inside the school	Removed				
The school leader (e.g. principal/head of school/superintendent) is referred to as the "CEO"	Modified	There is frequent use of business language at my school (for example, CEO, manager, output, market share)	Retained- Mokken EduBusiness Scale	There is frequent use of business language at my school (for example, CEO, manager, output, market share)	Retained - EduBusiness Scale
A teacher's supervisor is referred to as their "line manager"	Removed				
The school has a clear "chain of command"	Modified	My school has a clear "chain of command" in which I have little influence	Retained- Mokken Marketisation Scale	My school has a clear "chain of command" in which I have little influence	Business Influences Scale
The group that manages the school promotes the idea that higher school fees guarantee a better education	Modified	The group that manages my school promotes the idea that higher school fees guarantee a better education	Removed - Lower performing Marketisation		
Administrators at the school are inexperienced in school leadership	Removed				
Administrators at the school seem to be working to "prove themselves"	Modified	Administrators at the school seem to be working mainly to prove themselves	Retained- Mokken Marketisation Scale	Administrators at the school seem to be working mainly to prove themselves	Business Influences Scale
Administrators in the school act more like business managers than pedagogical leaders	Modified	Administrators in the school act more like business managers than pedagogical leaders	Retained- Mokken Marketisation Scale	Administrators in the school act more like business managers than pedagogical leaders	Business Influences Scale
Administrators in the school are primarily focused on their own career paths	Retained	Administrators in the school are primarily focused on their own career paths	Retained- Mokken Marketisation Scale	Administrators in the school are primarily focused on their own career paths	Business Influences Scale
The school communicates to parents through a public relations official	Removed				
Teachers are expected to deliver good "customer service" to parents	Modified	Staff are encouraged to deliver "customer service" to parents	Removed- Did not scale		
The school is run on a business model	Modified	My school is run on a business model	Retained- Mokken EduBusiness Scale	My school is run on a business model	Retained - EduBusiness Scale
The group that manages the school is not familiar with education practices	Modified	The group that manages my school is NOT familiar with education practice	Retained- Mokken Marketisation Scale	The group that manages my school is NOT familiar with education practice	Removed - Did not scale
Competition					
Strict budgeting process	Removed				
Devolved budget	Removed				
Devolved hiring practice	Removed				
Teaching staff salary is not directly related to their years of experience	Removed				

Table 40

Marketisation construct development Part 3

Initial Conceptualization	TSTI Result	2nd version	Pilot Result	3rd version	Final Result
Teacher's salaries are not standardized across the school	Removed				
Many teachers leave the school at the end of the school year	Modified	Many teachers leave my school at the end of the school year	Removed - lower performing Marketisation		
Teachers leave the school mid-year	Removed				
Unqualified teaching staff are employed by the school	Removed				
Expensive staff replaced with cheaper staff (less experience, local hire)	Removed				
A teacher can be denied contract renewal with no reason given	Modified	Staff members are denied contract renewal with no reason given	Retained- Mokken Marketisation Scale	Staff members are denied contract renewal with no reason given	Retained- Lack of Control Scale
There is a system of teacher evaluations	Modified	Multiple kinds of performance evaluation happen at my school (for example, teacher evaluations, lesson observations, goal setting, etc)	Removed - Did not scale		
Teacher evaluations may be conducted by people who are not necessarily familiar with the teacher's specialty	Removed				
The relationship between the teachers and the school is purely contractual	Removed				
There is a hierarchy differentiating the types of workers in the building	Modified	There is a hierarchy of status in my school based on national origin	Removed - Did not scale		
There is a social divide between teaching assistants, teachers, and administrators	Modified	The social relationships between staff members are marked with tension	Retained- Mokken Marketisation Scale	The social relationships between staff members are marked with tension	Retained- Lack of Control Scale
If the school's enrolment declined, it would be feasible that the school would close permanently	Removed				
Teaching staff receive a salary increase according to students' results	Removed				
The recruitment of staff to management positions is not a transparent process	Modified	The recruitment of staff from teaching to management is NOT a transparent process	Retained- Mokken Marketisation Scale	The recruitment of staff from teaching to management is NOT a transparent process	Removed - Did not scale
People are promoted within the school even when they are unqualified for the position	Retained	People are promoted within the school even when they are unqualified for the position	Retained- Mokken Marketisation Scale	People are promoted within the school even when they are unqualified for the position	Removed - Did not scale
Teaching staff are encouraged to compete against one another to raise overall school performance results	Modified	I am encouraged to compete against others to raise overall school performance results	Retained- Mokken Marketisation Scale	I am encouraged to compete against others to raise overall school performance results	Business Influences Scale
Teaching staff are ranked according to their performance	Modified	I am ranked against other staff members according to my performance	Modified (lower performing Marketisation)	I feel like my performance is compared against that of other staff members	Business Influences Scale

Table 41

Marketisation construct development Part 4

Initial Conceptualization	TSTI Result	2nd version	Pilot Result	3rd version	Final Result
External consultants used to improve school operations	Removed				
External consultants used to improve student outcomes	Modified	The opinions of external consultants are valued more highly than experienced teachers	Retained- Mokken Marketisation Scale	The opinions of external consultants are valued more highly than experienced teachers	Business Influences Scale
Increasing Enrolment					
The school enrols as many students as possible	Modified	My school enrols as many students as possible	Retained- Mokken EduBusiness Scale	My school enrols as many students as possible	Retained - EduBusiness Scale
Students are admitted into the school throughout the school year	Modified	Students are admitted into my school at many points in the school year	Retained- Mokken EduBusiness Scale	Students are admitted into my school at many points in the school year	Retained - EduBusiness Scale
Students are admitted into the school who will not access the main curriculum (e.g. students with poor language skills)	Removed- not always applicable				
The school enrols students who have been denied places at other schools.	Removed- indicates many different things				
The school competes against other schools to enrol students	Modified	My school competes against other schools to enrol students	Retained- Mokken EduBusiness Scale	My school competes against other schools to enrol students	Retained - EduBusiness Scale
Spaces in the school have been turned into classrooms to increase capacity	Modified	Spaces in my school are turned into classrooms to increase capacity	Retained- Mokken EduBusiness Scale	Spaces in my school are turned into classrooms to increase capacity	Removed - DIF (EduBusiness Scale)
Teacher intensification					
Teachers have a contract of 36 or more hours per week at school	Modified	I am required to spend too many hours per week at school	Retained- Mokken Marketisation Scale	I am required to spend too many hours per week at school	Removed - Dif (Business Influences Scale)
The teacher contract includes compulsory additional hours (e.g. delivering after school activity, weekend expectations, etc.)	Modified	My contract includes too many compulsory additional hours (e.g. delivering after school activity, weekend expectations, etc.)	Retained- Mokken Marketisation Scale	My contract includes too many compulsory additional hours (e.g. delivering after school activity, weekend expectations, etc.)	
Teachers' job descriptions include the possibility of any additional duties the management sees necessary	Removed				
Teachers at this school are expected to teach courses outside of their area of expertise	Modified	Staff members may be expected to teach outside their area of expertise	Retained- Mokken Marketisation Scale	Staff members may be expected to teach outside their area of expertise	
Teachers' job descriptions may change over the course of a school year	Modified	A staff member's job requirements may change over the course of a school year	Retained- Mokken Marketisation Scale	A staff member's job requirements may change over the course of a school year	Removed- Did not scale
The school makes promises to parents that the teachers cannot deliver	Modified	The school administration makes promises to parents that the staff cannot deliver	Retained- Mokken Marketisation Scale	The school administration makes promises to parents that the staff cannot deliver	Removed - Dif (Business Influences Scale)
Teaching staff do not receive additional payment for management responsibilities	Removed				

Table 42

Marketisation construct development Part 5

Initial Conceptualization	TSTI Result	2nd version	Pilot Result	3rd version	Final Result
Teachers are expected to use their own money to upgrade their skills (e.g. professional development, certification)	Removed				
	Added	I do extra work without pay	Modified- Mokken Marketisation Scale	I do extra work without extra pay	Removed - Did not scale
Teachers do what they are told out of fear of repercussions	Modified	Staff members do what they are told out of fear of repercussions	Retained- Mokken Marketisation Scale	Staff members do what they are told out of fear of repercussions	Removed - Dif (Lack of Control Scale)
The social relationships between staff members are tense	Modified	There is a social divide between teaching assistants, teachers and administrators	Retained in Marketisation even though it was low performing	There is a social divide between teaching assistants, teachers and administrators	Removed - Dif (Business Influences Scale)
Teachers at this school do the minimal amount of work	Removed				
Teachers are expected to "take it or leave it"	Modified	Staff members are expected to "take it or leave it"	Retained- Mokken Marketisation Scale	Staff members are expected to "take it or leave it"	Retained- Lack of Control Scale
Teachers who question their superiors suffer consequences for their actions	Modified	Staff members who question their superiors suffer consequences for their actions	Retained- Mokken Marketisation Scale	Staff members who question their superiors suffer consequences for their actions	Retained- Lack of Control Scale
Teachers gain recognition at the school by "playing the game"	Modified	Staff members gain recognition at the school by "playing the game"	Retained- Mokken Marketisation Scale	Staff members gain recognition at the school by "playing the game"	Retained- Lack of Control Scale
Teachers put aside their own convictions to be rehired	Removed				
Teachers must prove that student learning has occurred	Modified	There is pressure for staff to prove that learning has occurred	Retained- Mokken Marketisation Scale	There is pressure for staff to prove that learning has occurred	Business Influences Scale
Proving that learning has occurred sometimes takes precedence over actual learning happening	Modified	Proving that learning has occurred sometimes takes away from actual learning	Retained- Mokken Marketisation Scale	Proving that learning has occurred sometimes takes away from actual learning	Business Influences Scale
There is an expectation that all students should make above average progress	Removed				
Teachers are expected to make changes according to parent requests	Modified	Staff members are expected to make changes according to parent requests	Retained- Mokken Marketisation Scale	Staff members are expected to make changes according to parent requests	Business Influences Scale
Teachers take the blame when school policies don't work perfectly	Modified	Staff members take the blame when school policies fail	Retained- Mokken Marketisation Scale	Staff members take the blame when school policies fail	Retained- Lack of Control Scale
"Smoke in mirrors"	Removed				
	Added	There is favouritism for teaching staff who are friends with administrators	Retained- Mokken Marketisation Scale	There is favouritism for teaching staff who are friends with administrators	Retained- Lack of Control Scale
	Added	My previous experience is NOT valued at my school	Retained- Mokken Marketisation Scale	My previous experience is NOT valued at my school	Retained- Lack of Control Scale
			Added EduBusiness Scale	Earnings from the school benefit the school's managing group	Retained - EduBusiness Scale

Table 43

Lack of Control construct development Part 1

Initial Conceptualization	TSTI Result	2nd version	Pilot Result	3rd version	Final Result
Individual attributes					
I sought out employment with this employer	Removed				
I do care work	Modified	My work could be described as "child care"	Removed- Did not scale		
Many other workers do a similar job	Removed				
I implement procedures	Modified	My job is to follow a set of procedures	Retained- Labor Reproduction	My job is to follow a set of procedures	Retained- Lack of Control Scale
I mostly communicate orally	Removed				
I do the "dirty work"	Modified	I do "hands-on" work	Removed- Did not scale		
I would have to stay in my job even if I felt the need to leave	Modified	I would have to stay in my job even if I wanted to leave	Removed- Did not scale		
I have little say in how money is allocated	Modified	I don't participate in making budget decision	Retained- Means	I don't participate in making budget decision	Removed- Did not scale
My previous work experience is NOT VALUED	Retained	My previous work experience is valued very little	Retained- Labor Reproduction	My previous work experience is valued very little	Retained- Lack of Control Scale
I am expected to only worry about my immediate circumstances	Modified	What happens in other parts of the school is not my concern	Removed- Did not scale		
I focus little on my career aspirations	Retained	I focus little on my career aspirations	Retained- Means	I focus little on my career aspirations	Removed- Did not scale
Push-factors brought me to this job	Removed				
I am considered and immigrant to this country	Removed				
My job responsibilities vary/are flexible	Removed				
My work is behind-the-scenes	Retained	My work is behind-the-scenes	Removed- Did not scale		
I was hired locally	Removed				
I have little qualification for my job	Modified	My job requires only basic qualifications	Retained- Proceeds of Output	My job requires only basic qualifications	Removed- Did not scale
I receive little continuing training for my work	Removed				
Workplace characteristics					
My work is supervised by	Modified	My work is managed by several people	Removed- Did not scale		
There is little opportunity for me to move to another position	Retained	There is little opportunity for me to move to another position	Retained- Labor Reproduction	There is little opportunity for me to move to another position	Retained- Lack of Control Scale
Students are added to my classroom without my input	Retained	Students are added to my classroom without my input	Retained- Means	Students are added to my classroom without my input	Removed - Lower performing item
I have a shared work space	Modified	I share a workspace with other workers	Removed- Did not scale		
I have strict work hours	Removed				

Table 44

Lack of Control construct development Part 2

Initial Conceptualization	TSTI Result	2nd version	Pilot Result	3rd version	Final Result
I have limited control over my daily work	Retained	I have limited control over my daily work	Removed- Did not scale		
I am replaceable as a worker	Retained	I am replaceable as a worker	Modified	I could be easily replaced as a worker	Retained- Lack of Control Scale
I am inter-changeable with other workers	Removed				
I have little input on which types of assessment are used	Retained	I have little input into deciding which types of assessment are used	Retained- Means	I have little input into deciding which types of assessment are used	Removed- Did not scale
I stay out of the politics of the school	Retained	I stay out of the politics of the school	Removed- Did not scale		
I do not receive all the information that is passed down to my supervisor	Modified	I DO NOT receive all the information that is passed down to my supervisor	Removed- Did not scale		
My immediate supervisor has little power in the school	Retained	My immediate supervisor has little power in the school	Removed- Did not scale		
My career track would not take me to a leadership position	Retained	My career track doesn't lead to a leadership position	Retained- Labor Reproduction	My career track doesn't lead to a leadership position	Removed- Did not scale
Salary and Benefits					
I have a low wage	Retained	I have a low wage	Retained- Proceeds of Output	I have a low wage	Removed- Did not scale
I have an individually negotiated pay	Retained	I have an individually negotiated pay	Removed- Did not scale		
I have little financial assistance to increase my skills	Modified	My employer is unlikely to pay for me to develop my skills	Removed- Did not scale		
My wage is not connected to the profit of the company	Modified	My wage stays mostly the same from year to year	Removed- Did not scale		
I work on a short term contract	Retained	I work on a short term contract	Removed- Did not scale		
My wage does not support a family	Removed				
My sick leave days are unpaid	Modified	I don't have access to paid leave (for example, sick leave days, professional development, personal leave, maternity/paternity leave)	Removed- Did not scale		
My personal days are unpaid	Removed- combined with other item				
I earn near to the minimum wage required by law here	Retained	I earn near to the minimum wage required by law here	Retained- Proceeds of Output	I earn near to the minimum wage required by law here	Removed- Did not scale
Other similarly experienced people are promoted above me	Retained	Other similarly experienced peopled are promoted above me	Removed- Did not scale		

Table 45

Control construct development Part 1

Initial Conceptualization	TSTI Result	2nd version	Pilot Result	3rd version	Final Result
My work is an individual pursuit	Retained	My work is an individual pursuit	Retained - Scale 1	My work is an individual pursuit	Removed - Did not scale
I aggressively pursue goals	Modified	I free pressure to boldly pursue goals	Retained - Scale 2	I free pressure to boldly pursue goals	Removed - Did not scale
The goal is to rise up the ranks	Modified	I am expected to rise up the ranks	Retained - Scale 2	I am expected to rise up the ranks	Removed - Did not scale
I do my work autonomously	Retained	I do my work autonomously	Retained Scale 1	I do my work autonomously	Removed - Did not scale
My work requires courage	Retained	My work requires courage	Retained- Scale 3	My work requires courage	Removed - Did not scale
I am mastering a single line of work	Retained	I am mastering a single line of work	Retained - Scale 1	I am mastering a single line of work	Removed - Did not scale
I must use a lot of technological skill	Removed				
There is group solidarity with my colleagues	Modified	My relationships with colleagues only exist at school	Removed - Did not scale		
I must have a tough mind	Removed				
I don't take anything personally	Removed				
I work toward gaining more power	Modified	Doing my work well means I will gain more power	Removed - Did not scale		
I conform to expectations of my workplace	Modified	To be successful, I need to get other workers on my side	Removed - Did not scale		
My goal is to win	Removed				
My work is making decisions	Modified	A lot of my work is making decisions	Retained - Scale 3	A lot of my work is making decisions	Removed - Did not scale
I am publicly visible doing my work	Modified	I have to make appearances at public events	Removed - Weak scale		
I am supervising	Removed				
I manage other workers	Modified	I manage other workers	Removed - Weak scale		
I innovate new procedures	Removed				
I communicate through documents (email, memos, newsletters)	Removed				
I am working my way up the ladder of responsibility	Removed				
I earn a living wage with excellent benefits	Removed				
I earn a family supporting wage	Modified	My salary is enough to support a family	Retained - Scale 4	My salary is enough to support a family	Removed - Did not scale
I signed a long-term contract	Modified	My contract gives me job security	Retained - Scale 4	My contract gives me job security	Removed - Did not scale
My pay is based on a standard pay scale	Retained	My pay is based on a standard pay scale	Modified from Scale 4	My salary increases regularly	Removed - Did not scale
I have flexible working hours	Removed				
I have the ability to "move up" in position	Modified	From my position, I have the potential to "move up" to other positions	Retained - Scale 5	From my position, I have the potential to "move up" to other positions	Removed - Did not scale
Few other workers do the same job as me	Retained	Few other workers do the same job as me	Removed - Weak scale		
I have significant qualification	Modified	My job requires significant qualifications	Removed - Weak scale		
I receive significant training as part of my work	Removed				
I have significant control over my daily work	Modified	I have control over my daily work	Retained - Scale 6	I have control over my daily work	Removed - DIF for Level,
I was recruited for this position	Removed				

Table 46

Control construct development Part 2

Initial Conceptualization	TSTI Result	2nd version	Pilot Result	3rd version	Final Result
I have my own work space	Modified	I have a workspace to call my own	Retained - Scale 6	I have a workspace to call my own	Removed - Did not scale
I share in the profits of the company (through wages, bonuses, etc.)	Modified	When the school takes in more money, I am paid more (through increased wages, bonuses, etc.)	Removed - Did not scale		
My employer pays for me to develop my skills	Retained	My employer pays for me to develop my skills	Removed - Did not scale		
I am irreplaceable as a worker	Retained	I am irreplaceable as a worker	Removed - Did not scale		
I am a specialized worker	Retained	I am a specialized worker	Removed - Weak scale		
I am considered an expat in this country	Removed				
I was transferred to this job	Removed				
Pull-factors brought me to this job	Removed				
I earn much more than the minimum wage required by law here	Retained	I earn much more than the minimum wage required by law here	Retained - Scale 4	I earn much more than the minimum wage required by law here	Removed - Did not scale
I have paid sick leave days	Modified	I have access to paid leave days (for example, professional development, personal leave, maternity/paternity leave)	Retained - Scale 4	I have access to paid leave days (for example, professional development, personal leave, maternity/paternity leave)	Removed - Did not scale
I have paid personal days	Removed				
I am an active participant in budget decisions	Retained	I am an active participant in budget decisions	Removed - Did not scale		
I am involved in the process of accepting students into my classroom	Retained	I am involved in the process of accepting students into my classroom	Retained - Scale 5	I am involved in the process of accepting students into my classroom	Removed - DIF for Level
I have input on which types of assessment are used	Retained	I have input into which types of assessment are used	Retained - Scale 5	I have input into which types of assessment are used	Removed- DIF for International/National, Private/Public, and Level
I may be promoted above people with similar experience	Removed				
My career track could take me to a leadership position	Removed				
My job responsibilities are clear/inflexible	Removed				
My previous work experience is valued	Retained	My previous work experience is valued	Retained - Scale 5	My previous work experience is valued	Removed - Did not scale
I focus on my career aspirations	Retained	I focus on my career aspirations	Removed - Did not scale		
My immediate supervisor is a powerful person in the school	Retained	My immediate supervisor is a powerful person in the school	Retained - Scale 6	My immediate supervisor is a powerful person in the school	Removed - Did not scale
I involve myself politically in the school	Modified	I am involved in the politics of the school	Retained - Scale 6	I am involved in the politics of the school	Removed - Did not scale
I could leave my job at any time if needed	Retained	I could leave my job at any time if needed	Removed - Did not scale		
	Added	I receive extra pay for extra work	Removed - Did not scale		

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