

**“Sitting Pretty?”: A Mixed-Methods Study into the
amount of Time Irish Primary School Pupils spend
Sitting throughout the School Day.**

Professional Masters in Education

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Declaration

I hereby certify that this material, which I now submit for assessment on the programme leading to the award of the degree of Professional Master of Education, is entirely my own work and has not been taken from the work of others, save to the extent that such work has been cited and acknowledged within the text of my work. I further declare that this dissertation has not been submitted as an exercise for a degree at this Institute and any other Institution or University. I agree that the Marino Institute of Education library may lend or copy the thesis, in hard or soft copy, upon request.

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Abstract

The focus of this study is to investigate the amount of time children in Irish primary schools spend sitting and how much physical activity they participate in during a typical school day. In addition, this study also explores the factors influencing Irish Primary teachers' capacity to engage in physical activity with their pupils. It examines this issue from three different perspectives; beginning with a broad overview of the current educational landscape in Ireland including National policies, then filtering down to consider various aspects which may influence it at school level and finally by exploring individual teachers' identity and motivation and how these may impact upon teachers' everyday practice. This study's design involved a mixed-methods approach, with direct observations and self-reporting tools being the quantitative methods used, and semi-structured interviews with five primary school teachers being the qualitative methods undertaken. This study found that pupils in Irish primary schools sit for an average of 4 hours and 9 minutes of the school day (73%). All interview participants agreed that a positive school culture and adequate resources promoted their ability to engage in physical activity with their pupils. The main inhibitory factor was identified as "curriculum overload/time pressure" and all participants saw the need for more official curricular time to be devoted to physical education. 4/5 described their initial teacher education training in relation to physical education as insufficient and are open to professional development opportunities. In conclusion, the findings indicate that schools must be adequately resourced, teachers must be sufficiently trained and that official curricular time should be allocated daily to set a baseline of physical activity for each child.

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Chapter 1: Introduction

1.1 Introduction

The focus of this study is to investigate the amount of time children in Irish primary schools spend sitting and how much physical activity they participate in during a typical school day. In addition, this study also explores the factors influencing Irish primary teachers' capacity to engage in physical activity with their pupils. It examines this issue from three different perspectives; beginning with a broad overview of the current educational landscape in Ireland including National policies, then filtering down to consider various aspects which may influence it at school level and finally by exploring individual teachers' identity and motivation and how these may impact upon teachers' everyday practice. Figure 1. below demonstrates how these three elements combine to influence teachers' engagement in physical activity with their pupils.

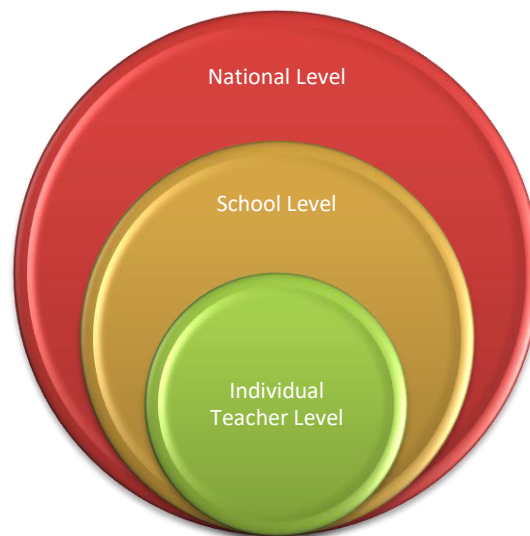


Figure 1. The Three Perspectives from which I will examine the factors influencing Teachers' engagement with Physical activity with their pupils

The issue of physical inactivity is important to explore as it demonstrates a clear risk to health and wellbeing in Ireland (Department of Health, Ireland, 2016). One in four children in this country have elevated blood pressure and are classified as being unfit,

overweight or obese (Woods, Tannehill, Quinlan, Moyna & Walsh, 2010). The same study also showed that 81% of primary school children do not meet the recommended amount of daily physical activity. In addition, Williams et al (2009) found that children's involvement in sport alone may be insufficient to meet these recommendations. This made me think about the amount of physical activity children participate in during school each day and led to the formulation of my main research question.

Examining the factors which influence teachers' capacity to engage in physical activity with their pupils is also very topical given the current educational climate in Ireland. Much research has been undertaken investigating the ideas of teacher identity (Devine, 2001) and motivation (Morgan, Ludlow, Kitching, O'Leary & Clarke, 2009), accountability and performativity (Burns, 2016) (Bell, 2003) (Conway & Murphy, 2013), school culture (Stoll, 1998) and the effects National policy has had on other educational objectives (Ó Breacháin & O'Toole, 2013). I was interested in exploring how all these elements might combine to influence teachers' everyday practice at this exact point in time, especially with the Primary curriculum undergoing review concurrently.

1.2 Chapter Outlines

This study consists of five chapters. Chapter 1 introduces the study and outlines its main focus. It also provides a rationale for the need to research this issue at this current point in time. The layout of the study is also explained through the chapter outlines in this chapter. Chapter 2 provides an in-depth analysis and review of the current literature connected to this topic including; the negative effects of excessive sitting on people's health, National and International recommendations and research relating to the factors influencing teachers' engagement with physical activity with their pupils. Chapter 3 describes the research design and the methodologies employed while carrying out the study. It also explains the reasons why each method was chosen along with their associated

limitations, including the overall limitations of the study itself. It outlines the sample selection, data collection and data analysis procedures along with ethical considerations and a statement of positionality from myself as a researcher of this study. Chapter 4 outlines the findings of both my Quantitative and Qualitative research and discusses these findings in relation to the research question. Chapter 5 concludes the study and outlines possible recommendations based on the research findings. It also identifies possible areas for further research. The Appendices include the Observation grid used in the study to collect the quantitative data, the semi-structured interview schedule used in the collection of the qualitative data and the various letters of Information and Consent for the different participants.

Chapter 2: Literature Review

2.1 Introduction

The focus of this study is to investigate the amount of time children in Irish primary schools spend sitting and how much physical activity they participate in during a typical school day. In this chapter I will explore the literature surrounding the negative effects excessive sitting can have on people's health before focussing on studies relating specifically to children, and then examining the various Irish and International Physical Activity recommendations published. This leads into the possible factors influencing Irish primary teachers' capacity to engage in physical activity with their pupils, examining this issue from three different perspectives; beginning with a broad overview of the current educational landscape in Ireland including National policies, then filtering down to consider various aspects which may influence it at school level and finally by exploring individual teachers' identity and motivation and how these may impact upon teachers' everyday practice.

2.2 The Negative Effects of Excessive Sitting on People's Health

There is a great deal of discussion currently ongoing with regard to the length of time adults spend sitting each day- in the workplace, during their commute and at home/recreationally. In this section I will examine the research linking the effects of this prolonged sitting to various health concerns. One of the largest pieces of research conducted on this topic was a meta-analysis involving nearly 800,000 people (Wilmot et al, 2012). This study's purpose was to systematically quantify the strength of association between sedentary behaviour and health outcomes. It included 18 observational studies (cross-sectional and cohort) across a range of countries, including England, Canada, Germany, Australia, Japan, Scotland and the USA.

Wilmot et al's (2012) study reported that the average adult now spends 50-60% of their day in sedentary pursuits. It also found that people who sat the longest had a 112% increase in risk of diabetes, a 147% increase in cardiovascular events, a 90% increase in death caused by cardiovascular events and a 49% increase in death from any cause. Their findings "consistently demonstrate a strong association between sedentary time and adverse health outcomes" (p.2903). However, Wilmot et al's (2012) study was limited in that it was an observational study so it could only detect association, not demonstrate direct causal effect. This was because other compounding factors associated with both sedentary behaviour and disease risk may have had an influence on the findings. These could include smoking, alcohol, diet or socio-economic factors. It also used self-reported measurements which are "likely to have poor validity" (p.2903). In addition, it only took into account those studies published in the English Language.

Sedentary behaviour and physical inactivity are identified as one of the leading risk factors for poor health with the World Health Organisation (2015) now identifying it as the fourth leading risk factor for global mortality. It is also estimated to be associated with one million deaths per year in the WHO European Region (World Health Organisation, 2015). In Ireland it is thought to be responsible for 10.9% of type 2 diabetes, 8.8% of coronary heart disease, 15.2% of breast cancer and 15.7% of colon cancer (Lee et al, 2012). Lee et al's study also raises an issue of particular concern, that in the case of all these major diseases, the Irish statistics are worse than both the European and global averages (2012).

2.3 The Negative Effects of Excessive Sitting: Research Relating Specifically to Children

This section examines studies on this issue from Canada, Ireland, Finland and the UK which deal specifically with children. This is particularly applicable to this study due to its position in the context of Irish primary schools.

McManus et al (2015) conducted a study in Canada which found that children are spending more than 60% of their waking day sedentary. While they acknowledge that the consequences of excessive sedentary behaviour are not well understood in children yet, they believe that there is growing evidence that with increasing sedentary time, cardiovascular risk in childhood also increases. Their study on seven -10 year old girls, found that after a single session of prolonged inactivity (sitting uninterrupted for three hours), the children developed significant changes in their blood flow (reduction in vascular function by 33%) and arteries that, in grown-ups, would signal the start of serious cardiovascular problems. The arteries in our legs normally dilate to allow healthy blood flow, but during prolonged inactivity, these arteries constrict, impeding blood flow, raising blood pressure and, over time, contributing to the development of cardiovascular disease.

According to the Irish Government's National Physical Activity Plan *Get Ireland Active!* (Department of Health, Ireland, 2016), inactive children are at risk of poorer self esteem, higher anxiety and higher stress levels. They are also more likely to smoke and use alcohol and illegal drugs than active children. The report also recognises that physical inactivity and sedentary behaviours are associated with numerous chronic diseases and that physical inactivity demonstrates a clear risk to health and wellbeing in Ireland. Children from socio-economic disadvantaged backgrounds are likely to spend more time on these sedentary activities (Layte & McCrory, 2011) and are also more than twice as likely to be obese (Walsh & Cullinan, 2015).

The Health Behaviours in School Children Survey 2006 (Nic Gabhainn, Kelly & Molcho, 2007) found that more than half of primary school age children in Ireland did not do the recommended level of physical activity. It also found that by 15 years of age almost nine out of 10 girls and seven out of 10 boys don't reach the recommended level. It is interesting to note the findings of Tammelin et al's report *Results From Finland's Report*

Card on Physical Activity for Children and Youth (2016) which found that 47% of Finnish children's daily sedentary time occurs in school.

Possibly the most comprehensive available information in relation to physical activity behaviours in school-going children in Ireland is the *Children's Sport Participation and Physical Activity Study* (Woods et al, 2010). 5,397 children aged between 10-18 years old from 53 primary and 70 post-primary schools were included in this cross-sectional study. It used self-report surveys, objective measures of physical activity and qualitative interviews to assess participation in physical activity, physical education, extra-curricular and extra-school sport. As previously mentioned, Nic Gabhainn, Kelly and Molcho's study found that in 2007 more than half of primary school age children in Ireland did not do the recommended level of physical activity. By 2010 the *Children's Sport Participation and Physical Activity Study* (Woods et al) found this figure to have increased to 81%. Similar to Nic Gabhainn, Kelly and Molcho's (2007) study it found that girls were less likely than boys to meet the physical activity recommendations and the likelihood of meeting the physical activity recommendations decreased as they got older. Woods et al's study also found that one in four children were unfit, overweight or obese and had elevated blood pressure (2010). It reported that children who met the recommended physical activity guidelines of at least 60 minutes of moderate to vigorous activity daily had the best health profiles (healthy levels of aerobic fitness, healthy weight and normal blood pressure for their age and gender).

The National Longitudinal Study of Children in Ireland, *Growing Up in Ireland. The Lives of 9-year-olds*. (Williams et al, 2009) found that only one in four nine-year-olds met the recommendation of 60 minutes of moderate to vigorous physical exercise every day. Like the two other studies mentioned above (Woods et al, 2010) (Nic Gabhainn, Kelly & Molcho, 2007) this study also found a significant gender difference already visible at this age, with boys (29%) more likely than girls (21%) to meet the guideline amount.

While the study showed that the majority of boys (84%) and girls (67%) were involved in some form of organised sports club or organisation, it also shows that involvement in sports alone may be insufficient to meet the recommended amount.

Part of the *Start Active, Stay Active* report (UK Department of Health, 2011) looked specifically at children under five and found that there is emerging evidence that sedentary behaviour in the early years is associated with being overweight or obese as well as lower cognitive development. Schaff and Millar's (2005) study is consistent with this statement as it describes how brain development is strongly influenced by the type or lack of childhood physical activity. At the other end of the scale, Ratey and Hagerman's (2008) study found that physical activity can improve children's ability to pay attention in class with another study by Sattelmair and Ratey (2009) showing how increased physical fitness improved academic performance.

The *Start Active, Stay Active* report (UK Department of Health, 2011) also describes how patterns of sedentary behaviour, especially Television viewing, stay relatively stable over time. This statement reflects the increasing awareness that early life experiences and habits can impact upon our health as adults.

2.4 National and International Physical Activity Recommendations

In this section I will examine National reports from Ireland, the UK and Finland and also look at some of the recommendations made by the studies previously mentioned. I will discuss their similarities such as; regular short breaks from sitting, reducing the total time spent sitting, 60 minutes of daily exercise, strengthening exercises, etc. I will also identify any other recommendations made in addition to those of the general consensus.

In McManus et al's (2015) Canadian study mentioned earlier they concluded that interrupting sitting with regular exercise breaks can prevent the reduction in function found as a result of prolonged sitting (they interrupted each hour with 10 minutes of moderate-

intensity exercise). This study found that short but regular exercise breaks were effective in offsetting the detrimental effects of uninterrupted sitting in young girls. Another publication which backs up this proposition of incorporating short but regular exercise breaks throughout the school day is the *Start Active, Stay Active* report by the Department of Health in the UK (2011), also mentioned earlier. This report strongly advises reducing total sedentary time and breaking up extended periods of sitting for children. It recommends breaking up these long periods of sitting time with “shorter bouts of activity for just one to two minutes” (p.19) and they developed the ‘Sit Less, Move More’ slogan to promote this.

In combating the findings of Tammelin et al’s (2016) study Finland’s Ministry of Social Affairs and Health launched its first set of national recommendations to reduce sitting time and made this specific to schools with their ‘Finnish Schools on the Move’ initiative. This Finnish National action programme is aimed at establishing a physically active culture in their schools with the participating schools implementing their own individual plans to increase physical activity during the school day. By November 2016, more than 80% of municipalities and 70% of comprehensive schools were participating in the initiative. Among the measures aimed at increasing physical activity include adding more physical education lessons, promoting active commuting and encouraging physically active breaks. During the lessons themselves, sedentary behaviour can be decreased by implementing active learning methods involving short active breaks in order to support optimal learning and avoid long periods of continued sitting. This links in with the above discussion on the promotion of regular short exercise breaks.

Similarly, a study by O’Connor, Lambe, Gleeson and Henry (2016) also calls for incorporation of physical activity into the classroom where effective, frequent movement is integrated to enhance learning. This could be particularly effective in junior classes where

movement can be integrated as a transitioning strategy between lessons as well as being incorporated into all lessons.

Ireland's National Physical Activity Plan *Get Ireland Active!* (Department of Health, 2016) recognises that physical activity promotes healthy growth and development in children and young people and contributes to cognitive function. It recommends that children and young people (ages 2 – 18) should be active, at a moderate to vigorous level, for at least 60 minutes every day. This activity should include muscle-strengthening, flexibility and bone-strengthening exercises three times a week. As part of the *Physical Activity Guidelines for children and young people* (Department of Health, United Kingdom, 2011) various factsheets for different age groups were also published. *Factsheet no.3* (Department of Health, United Kingdom, 2011) *recommendations for five to 18 year olds* reiterates what Ireland's National Physical Activity Plan *Get Ireland Active!* (Department of Health, 2016) says; to complete at least 60 minutes of moderate to vigorous physical activity every day and three times a week these activities should include exercises for strong muscles and bones. It also states that total time spent sitting should be reduced, taking the option to walk or cycle instead of travelling by car. In a similar way, the *Children's Sport Participation and Physical Activity Study* (Woods et al, 2010) mentioned earlier also recommends that participation in sport and physical activity in Ireland should be increased. Further to Williams et al's (2009) finding that involvement in sports alone may be insufficient to meet the recommended amount of daily activity, Layte and McCrory (2011) in the National Longitudinal Study of Children, *Growing up in Ireland, Overweight and Obesity among 9 year olds* state that a key challenge for policymakers is the development of an integrated approach to sport and exercise which draws together those involved in sport from inside and outside schools. As mentioned earlier in section 2.3, this study also identified how socio-economic disadvantage is strongly associated with children spending more time on sedentary activities. With this in

mind the study recommends a strategic approach which would ensure a consistency across schools, particularly focussing on those in lower socioeconomic and deprived areas.

A study which adds more to the general consensus is *The Start Active, Stay Active* report (Department of Health, United Kingdom, 2011) where it talks about the importance of establishing healthy patterns of behaviour from an early age so as to foster a life-long appreciation of physical activity. It states that by giving the children these long-term skills it may help “protect against possible health detriments in the future” (p.22). This report highlights the essential role of physical activity in promoting physical and psychological development during childhood and how it contributes towards “establishing patterns of behaviour that may persist into later childhood and adulthood” (p.21).

Ratey and Hagerman’s (2008) study calls for a review into the delivery of Physical Education to ensure that cardiovascular fitness and developmental skills are emphasised, rather than just sports skills. By measuring children’s progress rather than their skills, it may also provide additional motivation to those who are less skilled (O’Connor, Lambe, Gleeson & Henry, 2016).

2.5 The Possible Factors Influencing Irish Primary Teachers’ Engagement in Physical Activity with their Pupils

In this section I will examine the literature surrounding the possible factors influencing Irish primary school teachers’ capacity to engage in physical activity with their pupils. I will explore this issue from three different perspectives; beginning with a broad overview of the current educational landscape in Ireland including National policies, then filtering down to consider various aspects which may influence it at school level and finally by exploring individual teachers’ identity and motivation and how these may impact upon their everyday practice.

2.5.1 National Policy Level

In this section I will discuss how National Policy either helps to promote teachers' engagement in physical activity with their pupils through the National physical activity plan (Department of Health, 2016) and DEIS supports (Department of Education and Skills, 2016), or how it may inhibit it, through curricular time allocation (NCCA, 1999) and the effects of the National Strategy for Literacy and Numeracy (Department of Education and Skills, 2001).

Beginning with a policy which may help to promote this engagement is the National physical activity plan *Get Ireland Active!* (Department of Health, 2016) developed under *Healthy Ireland, A Framework for Improved Health and Wellbeing 2013-2025* (Department of Health, 2013). This National framework calls for whole society action to improve the health and wellbeing of people living in Ireland and aims to get at least half a million more Irish people taking regular exercise within ten years. 'Action Area Two' focuses directly on children and young people with specific targets in this area; to increase by 1% per annum the proportion of primary children undertaking at least 60 minutes of moderate to vigorous physical activity every day (currently at 19%) and to decrease by 0.5% per annum the proportion of children who do not take any weekly physical activity (currently at 11%). By 2020 it plans to include "the promotion of physical activity in children as an integral component of education and training programmes that lead to qualifications in early childhood care and education" (p.20). The ring-fencing of €5.5 million towards various initiatives named as part of this plan, appears to demonstrate a strong commitment to the promotion of physical activity in Ireland at a National Level. This funding includes extending the 'Active Schools Flag' Programme to 500 more schools. This programme encourages schools to achieve a physically educated and physically active school community.

The National education policy to address educational disadvantage, DEIS - *Delivering Equality of Opportunity in Schools* (Department of Education and Skills, 2016) launched in May 2005 can also be viewed as a factor helping to promote the engagement of teachers' in physical activity with their pupils. As mentioned earlier, children from socio-economic disadvantaged backgrounds are likely to spend more time on sedentary activities (Layte & McCrory, 2011) and access to safe outdoor play areas where children can be physically active can often be reduced, particularly where there is a higher level of violent crime (O'Connor, Lambe, Gleeson & Henry, 2016). As children from these communities are also more than twice as likely to be obese (Walsh & Cullinan, 2015) it suggests that "resources for interventions should be heavily targeted at lower socio-economic schools and communities with DEIS providing an existing mechanism through which this can occur" (Layte & McCrory, 2011, p.58). The National physical activity plan *Get Ireland Active!* (Department of Health, 2016) also highlights DEIS schools as a route to improving outcomes for these children. Schools which qualify for the DEIS programme receive a grant based on the level of disadvantage and enrolment (Department of Education and Skills, 2016) and they also have a lower pupil: teacher ratio and access to a range of professional development supports. Both of these factors may help to positively influence teachers' engagement in physical activity with their pupils. DEIS schools also have access to Home School Community Liaison (HSCL) services with the National Task Force on Obesity (2005) recommending that these HSCL Coordinators incorporate 'healthy life skills' within the wider framework of home visitation and promote courses and classes for parents. As the DEIS policy is targeted towards increasing levels of participation and partnership between schools, parents and local communities these coordinators are well placed to facilitate policy interventions targeted at home and school and increase the involvement of local communities.

Examining now the policies which may inhibit teachers' engagement in physical activity with their pupils I will discuss the official curricular time allocated to Physical Education (NCCA, 1999) and the National Strategy for Literacy and Numeracy (Department of Education and Skills, 2001).

A report published by Eurydice, the European Union's Education Information Network, *Physical Education and Sport at School in Europe* (European Commission, 2013) shows that Ireland's provision of PE was third from the bottom of 36 European countries surveyed. Although the quality of PE teaching was praised, the report criticised Ireland's provision of curriculum time to PE as consistently low. Irish primary pupils have on average about 37 hours of PE classes throughout a school year while every other country included demands at least 45 hours a year. In comparison to primary pupils in French schools who typically have PE classes for a total of 108 hours over the year, Irish pupils have nearly three times less. In proportionate terms, Irish pupils spend only 4% of their school time in PE class while students in Croatia spend 15% of their primary school time being physically exerted.

Recommendations made by the National Longitudinal Study of Children, *Growing up in Ireland, Overweight and Obesity among 9 year olds* (Layte & McCrory, 2011) include the need for educational policy to "recognise the importance of sport and exercise and make room for this in the school day" (pg. 57). Another study which calls for the allocation of appropriate time to physical activity throughout the school day (by increasing the overall time allocated to Physical Education) was conducted by O'Connor, Lambe, Gleeson and Henry in 2016. They concede that this time may have to come from other subjects if integration is not possible, but that this increased time allocation would be in recognition that academic performance is positively affected by physical activity. (Sattelmair & Ratey, 2009).

Under the National physical activity plan *Get Ireland Active!* (Department of Health, 2016) the National Council for Curriculum and Assessment will finalise a new Physical Education (PE) curriculum framework at Senior Cycle level and a new school subject called ‘Wellbeing’ will be launched in September 2017 as part of the new Junior Cycle to include PE. However, this National physical activity plan has not allowed for any additional time allocation to PE in Primary schools so it will maintain its current allocation of one hour per week as per the National primary school curriculum (NCCA, 1999).

Another policy which may inhibit the capacity of teachers to engage in physical activity with their pupils is *The National Strategy to improve Literacy and Numeracy among Children and Young People 2011-2020* (Department of Education and Skills, 2011). Since its introduction the time allocation for Literacy and Numeracy was increased and some or all of the discretionary curriculum time is now to be used for literacy and numeracy activities (DES, 2011). The National Task force on Obesity’s report *Obesity: The Policy Challenges*’ (2005) had put forward a number of recommendations to increase physical activity in schools, including guidelines for time spent on physical education, and teacher training to support healthy eating and active living. However, the report on its implementation (2009) notes that this recommendation is “not possible at this time” because of constraints on the time available in the curriculum. It was already stated in 2009 that there was insufficient time to implement these recommendations, this, combined with the loss of all discretionary time in 2011 surely has impacted negatively on teachers’ capacity to engage in physical activity with their pupils.

The *National Strategy on Literacy and Numeracy* (DES, 2011) itself states that a key driver behind its publication was the worsened performance of Irish 15-year-olds in the Programme for International Student Assessment (PISA) between 2006 and 2009, with Ireland dropping from fifth to seventeenth place out of 34 countries (OECD 2009). They went from performing at an “above average” level to performing at the “average” level in

the Assessment. As I will discuss in more detail in the following sections, this has contributed to a narrow focus on literacy and numeracy and a results driven accountability for teachers (Conway & Murphy, 2013). Ó Breacháin & O'Toole (2013) also argue that this new focus on literacy and numeracy led to the exclusion of other educational objectives in Ireland and threatens the holistic ethos of the curriculum. The Department of education's policies on school self-evaluation and whole school evaluations will also be explored in the next section on "School Level". All of the above factors combine to affect teachers' capacity to engage in physical activity with their pupils.

2.5.2 School Level

In this section I will discuss how factors at school level can either promote or inhibit teachers' engagement in physical activity with their pupils. Beginning with how a positive School culture can promote this engagement, Stoll (1998) states that it is "one of the most complex and important concepts in education" (pg. 9). She describes how school culture is shaped by a school's history, context and the people in it and how it defines reality for these people, giving them support and an identity. Each school has a different mindset of school life, often captured in the simple phrase "the way we do things around here". A school's attitude towards and commitment to physical activity could positively contribute to teachers' engagement in physical activity with their pupils, evidenced by the undertaking of such initiatives as the attainment of an Active Schools Flag. Tied up with this idea of school culture is the idea of Collegiality which involves mutual sharing and assistance and an orientation towards the school as a whole (Stoll, 1998). Volunteerism is also a fundamental part of this collegiality and will be discussed in the next section.

A factor at school level which could negatively impact on a teachers' capacity to engage in physical activity with their students could include the increased levels of accountability and surveillance. Accountability describes the ongoing evaluation and supervision of teachers, and of schools, who must report their standardised test scores.

Conway and Murphy (2013) describe how Ireland's educational landscape has changed dramatically in terms of this concept of accountability, with the focus shifting to compliance with regulations, adherence to professional norms and attainment of results/outcomes. They describe how a "rising tide" of accountability since the late 1990's met a "perfect storm" in 2010 with the results of the PISA (OECD, 2009) results and the economic bailout of the Irish economy as well as strategic leadership at a system level. They state how the two combined and saw a dramatic shift towards the dominant global education reform movement with an emphasis on standardisation, a narrow focus on literacy and numeracy (as mentioned in the discussion about the National Strategy above) and higher stakes, results driven accountability. Another example of surveillance at school level is the process of school self-evaluations. These are described as collaborative, reflective processes of internal school review which provides teachers with a means of systematically looking at how they teach and how pupils learn. It reports to help teachers to improve outcomes for their learners (Department of Education and Skills, 2016). Incidental inspections and Whole School Evaluations are another form of school level surveillance where the quality of the school management and leadership, the quality of teaching, learning and assessment and the schools own planning and self-review is inspected and assessed by the Department of Education and Skills (Department of Education and Skills, 2016).

2.5.3 Individual Teacher Level

In this section I will discuss factors at the level of individual teachers which can either promote or inhibit their engagement in physical activity with their pupils. Factors that promote teachers' engagement include positive self-efficacy beliefs and teacher identity including motivation and volunteerism.

Tschannen-Moran, Woolfolk Hoy and Hoy (1998) claim that Bandura's (1977) theory that teachers' self-efficacy beliefs relate to the effort teachers invest in their

teaching and their persistence when things do not go smoothly is applicable to my study. As part of *Get Ireland Active!* (Department of Health, 2016) it has been proposed that physical activity will be used as an educational tool, especially at primary level, and a professional development support service on physical activity will be set up for teachers. This could positively impact on teachers' engagement in physical activity with their pupils as teachers' may have higher self-efficacy beliefs when additional training is provided. In *Beginning to Teach* (Department of Education and Skills, 2006) a report on the experience of newly qualified teachers, it found that the majority of newly qualified teachers felt satisfied with their level of preparedness stating that their initial education course prepared them well or very well to teach PE.

As mentioned previously, collegiality and school culture can have a positive influence on teachers' practice. This school culture can also promote volunteerism in areas such as extra-curricular activities. Teacher identity can be defined as how teachers understand and define themselves (Devine, 2011) with this evolving over the course of their career. Teacher motivation has to do with teachers' desire to participate in the education process with one study finding (Morgan, Ludlow, Kitching, O'Leary, Clarke, 2009) that the main motivating factors are found within the classroom and have their origins in the intrinsic reasons for becoming a teacher. This study also found that teachers enjoyment of the interpersonal aspects of teaching was ranked most important, followed by the progress children were made and then by the children's engagement in learning.

Factors at an individual teacher level which may inhibit teachers' engagement in physical activity with their pupils include the concepts of accountability and performativity. Ball (2003) describes performativity as accountability (teacher evaluation) which employs judgements and comparisons with a person's worth or value being based on their productivity or output. Ball (2003) also argues that this concept of performativity is a new mode of state regulation which requires individual practitioners to organise

themselves as a response to targets, indicators and evaluations and to set aside personal beliefs and commitments. Burns (2016) examines how early career teachers are coming under increasing pressure due to the growth of these discourses, and looks at how it impacts on their daily educational practices. He finds conflicting relationships have developed as a result of this outcome-driven, market-led educational system with emphasis on standardised testing and it has directly influenced the methodologies and strategies these teachers are using with the children in their classes. It could be inferred from these studies that teachers have certain priorities forced on them as a result of the educational background in this country. They are under increasing pressure for their students to achieve high results in standardised tests, which results in more time being spent on those curricular areas, to the detriment of other educational objectives (Ó Breacháin & O'Toole, 2013). This could be seen to impact negatively on teachers' engagement in physical activity with their pupils.

2.6 Conclusion

In conclusion it is clear that excessive sitting/sedentary behaviour has negative health effects and a concerted effort needs to be made to reduce the current levels in this country, especially in our children. Efforts also need to be made to increase their levels of physical activity, aided by various guidelines published internationally and in Ireland. For teachers however it is not a matter of simply following these recommendations, as there are numerous other factors which can influence their engagement in physical activity with their pupils. These factors may be at National policy level, school level or at the level of the individual teacher themselves.

Chapter 3: Research Design and Methodology

3.1 Introduction

The purpose of this chapter is to outline the research design and the methodologies which were employed in order to achieve the aims of the study. I will also outline the reasons why certain methodologies and tools were chosen to fit the design of the study. Next, I will discuss the sample selection and data collection procedure I undertook and how I then analysed this data. Ethical considerations will then be discussed and I will outline my positionality as a researcher of this study. Lastly, I will identify the limitations of the various elements of the methodology utilised and of the study itself.

3.2 Design of the Study

In this study I aim to examine the amount of time children in Irish primary schools spend sitting during the school day. In addition to this I aim to explore the factors which influence teachers' engagement with physical activity with their pupils. As I am dealing with two separate but still connected aspects, it was felt that the most appropriate design would involve a mixed-methods approach incorporating both qualitative and quantitative approaches. Creswell and Clark (2009) describe this mixed-methods approach as being more than simply collecting and analysing both kinds of data. They state that by using both approaches in tandem the overall strength of a study is greater than either the qualitative or quantitative research (Creswell & Clark, 2009). Direct observations and self-reporting tools were the quantitative methods used, and semi-structured interviews were the qualitative methods undertaken.

3.3 Quantitative Methods

Punch (2009) states that quantitative research centres on concrete numerical data and relationships between groups so it was chosen for use in this study as I could then

compare classes, the amount of time spent sitting v not sitting, etc. The quantitative tool I used was an Observation grid (Appendix A) with an individual box representing each minute the children were in school (9.20am to 3pm). When the children were not sitting down a mark would be placed into the corresponding box for that minute. I trained 16 children (four each from 3rd, 4th, 5th and 6th class) on the use of this tool as a self-reporting mechanism. One day prior to the recording period I piloted this instrument for one hour with each class first to ensure ease of use and accurate data collection. After the pilot test I consulted with the children and edited the instrument using their feedback. The boxes which accounted for lunch-time minutes had confused some children so the new template now had these minutes pre-shaded in. I also used this pilot test to assess if the children's self-reported data was similar to my own data collected by observation. Both sets of data collected gave very similar accounts of the time spent sitting so I was confident in their data collection abilities. The edited instrument proved to be user-friendly and efficient and it also aided the structured numerical approach to data analysis.

3.4. Qualitative Methods

Through exploration of the literature surrounding the topic I decided that semi-structured interviews would be the most appropriate qualitative instrument for my study. Qualitative research examines individual experiences and Denscombe (2014) states that it allows for the nurture and extraction of underlying reasons and opinions that surround complex topics, both of which I was trying to achieve in this part of my study. Bell (2010) argues that an advantage of this type of research is the rich detail obtained in the study, something that would allow me to gain a deeper understanding of the experiences and challenges facing teachers in regards their engagement with physical activity with their pupils. The interviews comprised of questions about the participants' beliefs regarding the factors which influence this.

I constructed a pilot interview schedule aligned with the three perspectives described in my introductory chapter (National level, School level and Teacher level). This was to ensure the data collected would be specific enough to answer my research question and also that the data collected would then be able to be analysed appropriately. I conducted this pilot interview with the 1st class teacher from the same school who was not taking part in the actual study. On analysis of the pilot interview and with feedback from my dissertation supervisor, the interview schedule structure was changed, as was the wording of some of the questions.

Structurally, Instead of opening the interview with discussion on National policy it was thought that it might be more beneficial to begin with a discussion on the teacher's own attitude and experiences, thus providing them with the opportunity to talk about themselves and their own context first before building outwards from there to the school context and then onto the National context. At a question level, I also changed the wording of some, as they were seen to be leading the participant e.g. "Do you think there is too much focus on literacy and numeracy to the exclusion of other educational objectives? If yes, do you feel this threatens the holistic ethos of the curriculum?". When instead, I should have been looking for the participants to determine for themselves the factors promoting or inhibiting them from engaging in physical activity with their pupils, thus making the data more authentic and reflective of the teachers' attitudes. The questions were then changed to reflect this with one of the key questions becoming "What do you feel are the main factors making it difficult to devote time to doing more physical activity with your pupils throughout the day?". I then had prompts ready to assist them in considering issues identified from my literature review if needed e.g. "What are your thoughts on the National Strategy on Literacy and Numeracy?".

The pilot interview also allowed me to assess my timing and review my skills as an interviewer and I found the overall process to be very beneficial, confirming Sampson's

(2004) assertion. Once the interview schedule (Appendix B) was finalised I conducted these semi-structured one-on-one interviews with the five respective class teachers (2nd-6th class).

3.5 Sample Selection

For the purposes of this study I used a sample of convenience. The school from which the sample was drawn is a rural school with approximately 186 pupils enrolled. It is a mixed, vertical school with a Catholic ethos. There are eight class teachers, one resource teacher, one learning support teacher and two special needs assistants. The school promotes a culture of respect, education and friendship in an inclusive environment and also has a strong focus on extra-curricular activities including sport, dancing and choir singing. The participating teachers were all from this school and were selected on the basis of the classes they were teaching and the ability of their pupils to complete the self-reported observation grids (2nd-6th class). I approached each teacher individually and all five agreed to participate in both parts of the study. Four children each from 3rd-6th class were also selected in consultation with their class teachers to fill out the observation grids.

The following table (Figure 2.) outlines each participating teacher's gender, the class currently being taught and their years of teaching experience. Pseudonyms were assigned to maintain confidentiality.

| | Gender | Class Taught | Years of Teaching Experience |
|-----------------|--------|-----------------|------------------------------|
| Sarah | F | 2 nd | 26 years |
| Grace | F | 3 rd | 8 years |
| Claire | F | 4 th | 1 year |
| Deborah | F | 5 th | 6 years |
| Margaret | F | 6 th | 32 years |

Figure 2. Teacher Profiles of Participants in Semi-Structured Interviews

3.6 Data Collection

I gathered my quantitative data over four days of direct observations of 2nd class children in the natural setting of their classroom and 16 pupils selected from 3rd-6th class recorded their data over the same period. The duration of time spent not sitting down was recorded using Observation grids. I am aware that there could be recording inaccuracies as a result of using this self-reporting method and it could lead to possible reliability issues with my data. To try and decrease the possibility of this I did a pilot test with these children one day prior to the recording period, observing each class for 1 hour and then comparing my results to theirs (as discussed earlier in this chapter in section 3.3 “Quantitative Methods”). Both sets of data collected gave very similar accounts of the amount of time spent sitting so I was confident in the children’s data collection abilities.

Five semi-structured one-on-one interviews with the respective class teachers (2nd - 6th class) were conducted after the qualitative data had been collected, each of approximately 15 minutes duration. The questions explored the participant’s own attitudes and experience of physical activity at an individual level, then from the level of the school and then onto how National policy affects them. Most of the questions were open-ended and I was able to let the interviewees speak freely while also being able to probe and ask for clarification where necessary. During the interviews I took field notes to record any non-verbal communication. The interviews were audio recorded with the participants’ permission and later transcribed verbatim with pseudonyms assigned to replace participants’ real names.

3.7 Data Analysis

The Quantitative data collected consisted of 17 Observation grids (16 children’s and my own). These Observation grids (Appendix A) had an individual box representing each minute the children were in school (9.20am to 3pm). The total time spent by children in a

primary school each day is five hours and 40 minutes (340 minutes). If breaks (40 minutes) are excluded from this total then there is a potential sitting time in the classroom of 300 minutes. For the purposes of this study these 300 minutes will be referred to as “Classroom Minutes”. When the children were not sitting down a mark was placed into the corresponding box for that minute. Each minute that had been spent not sitting down had been marked and these were then counted up for each day. The average time per class was calculated using the four children’s figures from that class.

Results of the study were presented using descriptive statistics and Excel was used to create various tables, graphs and charts for a more visually appealing representation of this information. Various combinations of data were examined such as; the overall average time a child spends sitting during the school day, how many minutes spent being active on an average day (out of 300 Classroom Minutes and the full school day), also finding these as percentages and looking at the differences between days. Comparisons of classes were also made against each other and they were ranked in order of the most amount of Active Minutes per week and how many days classes were above or below the overall average.

The qualitative data consisted of five audio-recordings of the semi-structured interviews, the transcripts from these interviews and my field-notes. For analysis purposes each line was double spaced and numbered, and each page was numbered with a large indent to allow for coding notes. I scanned the transcripts to check for emerging themes and concepts which will be discussed in detail in the “Findings and Discussion” chapter. I then re-read the transcripts thoroughly focussing my attention at sentence level and coded them. I analysed each sentence for the purpose of expanding these themes and I then decided on the themes I felt were most important and eliminated the others (Merriam, 2009). I used these to help structure my findings in a way that made analysis and the drawings of conclusions possible (Creswell & Clark, 2009).

As part of my qualitative analysis I decided to reference exactly how many participants responded in a particular way about something, for example “3 out of 5 agreed” or “4/5th’s felt”, rather than simply saying “most”. I feel this type of reporting adds validity to the analysis of my findings and gives the reader a clear understanding of the participants responses and how they were then grouped. It also ties in with the general mixed-methods approach undertaken in this study.

3.8 Ethical Considerations

I explained to the Principal and the participating teachers that this study, including the observations and the interviews, were being conducted on a purely fact finding basis. An Information and Consent letter (Appendix C) was signed by the Board of Management and by each of the participating teachers (Appendix D). I also drafted Information and Consent letters (with Assent sections for the children themselves) for Parents/guardians of both the children who were being observed (Appendix E) and also for the children collecting the self-reported data (Appendix F). It was explained to the parents that their children’s recording of this data should not have a negative impact on their normal class work and that no child would be identified or singled out in any way.

I informed the interview participants verbally and within the written information letter and consent form that the information they disclosed would be kept anonymous. Pseudonyms were assigned to each of the five teachers to maintain confidentiality. All were assured before starting the interview that if they did not wish to answer a question they could simply pass on it. Participants were also made aware that they had, and would continue to hold, the right to withdraw from the study at any time. The audio recordings of these interviews are stored on a password protected laptop and the field notes, transcripts, consent forms and observation grids are also kept in a secure location. All data will be destroyed in line with the requirements of MIE.

3.9 Researcher Positionality

As the main researcher of this study all data collection was mediated through me complete with my assumptions and biases. Punch (2009) suggests that a way of combating the issue of fairness is to state the bias of the researcher so it is important for me to outline my position within this research. I am a Professional Masters in Education (PME) final year student in Marino Institute of Education and prior to this course I obtained a degree in Physiotherapy from University College Dublin. I gained five years experience working in the areas of Musculoskeletal and Sports Physiotherapy, Pilates and Personal Training. I have a huge interest in health and wellbeing and I am deeply concerned with the growing levels of childhood obesity reported in this country and the increasingly sedentary lifestyle which appears to have become the norm in our society. My experience as a teacher is limited to the four blocks (16 weeks in total) of school placement undertaken as part of my PME course. However, I have gained experience in various other schools through my role as a GAA coach. I have chosen this topic as I believe there should be more official curricular time and resources made available for teachers to engage in physical activity with their pupils with the end goal of it becoming part of pupils' everyday school routine.

3.10 Limitations

This study is not without its limitations. Due to time and access restrictions, all participants obtained for this study are employed in one primary school so this study only captures the experiences and perspective of teachers in this school. As a small scale study this research does not make any claims to generalisability, however, it does aim to lead to a deeper understanding of the factors influencing Irish primary school teachers' engagement with physical activity with their pupils on a daily basis.

Qualitative research designs can be highly subjective (Bell, 2010) and Cohen et al (2011) suggest that there is always a danger of bias in this type of research due to its

subjective nature. My statement of positionality hopes to make the reader aware of and minimise any potential bias on my part in the interpretation of the data. Denscombe (2010) also identifies how interviewees may respond differently depending on how they view the interviewer and how they want to give what they feel is expected to be the “right answer”.

As mentioned previously in section 3.6 “Data Collection” some of my quantitative data is based on self-reported measures so its reliability may not be 100% accurate. My efforts to counteract this included doing a pilot test with the 16 children selected, where I observed their classes for one hour each and then compared my results with theirs to check for any irregularities in the recordings. I also tried to minimise other self-reporting issues by having more than one reporter in each class and then taking the average of these four results.

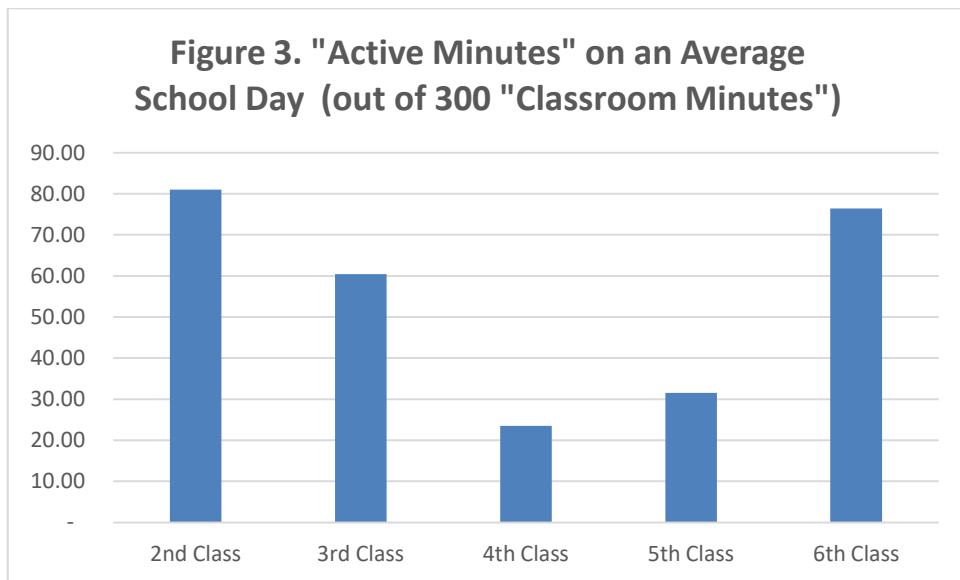
Chapter 4: Findings and Discussion

This section illustrates the findings of both the quantitative and qualitative research instruments. Descriptive statistics will be used to represent the quantitative data while the qualitative data will be presented using various themes and discussed using the three different perspectives as outlined in the introductory Chapter 1 (Individual teacher level, School Level and National policy level). The discussion on these findings will also include what new information we have learned as a result of undertaking this research.

4.1 Quantitative Results

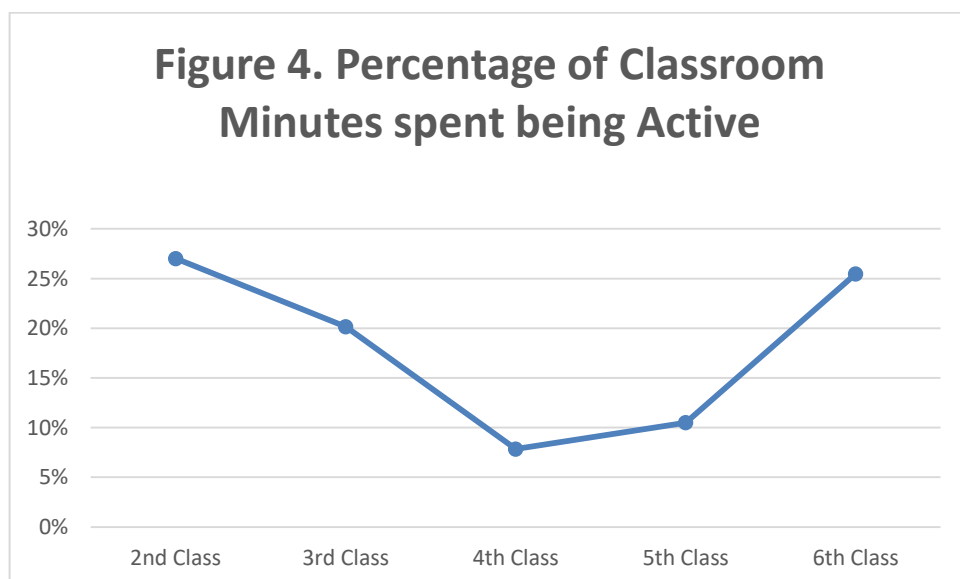
This study found that pupils in Irish primary schools sit for an average of 4 hours and 9 minutes of the full school day (73%). If we exclude the time spent being active during break-times, then 51 minutes (out of “300 Classroom Minutes”) are spent not sitting each day (17%).

As discussed in the section 3.7 the quantitative data consisted of 17 observation grids. Each minute that had been spent not sitting had been marked and these were then counted up for each day and I calculated the average time per class. For the purposes of this study I will refer to these non-sitting minutes as “Active Minutes”. The total time spent in a primary school each day is five hours and 40 minutes (340 minutes). If breaks (40 minutes) are excluded from this total then there is a potential sitting time in the classroom of 300 minutes (“Classroom Minutes”). Figure 3. shows the average “Active Minutes” per day by class over the four days of observations.



From this graph we can see that on an average day 2nd class gets 81 minutes Active Minutes out of 300 Classroom Minutes, 3rd class gets 60 minutes, 4th class gets 24 minutes, 5th gets 32 minutes and 6th gets 76 minutes.

Figure 4. below shows us these Active Minutes as a percentage of the Classroom Minutes. 2nd class spend 27% of their Classroom Minutes up and active, 3rd spends 20%, 4th spends 8%, 5th spends 11% and 6th spends 25%.



By looking at each of the four observation days separately (see Figure. 5) we can easily see the amount of Active minutes varies everyday and with every class. Possible reasons for this could be timetabled Physical Education class, School football or camogie game, etc

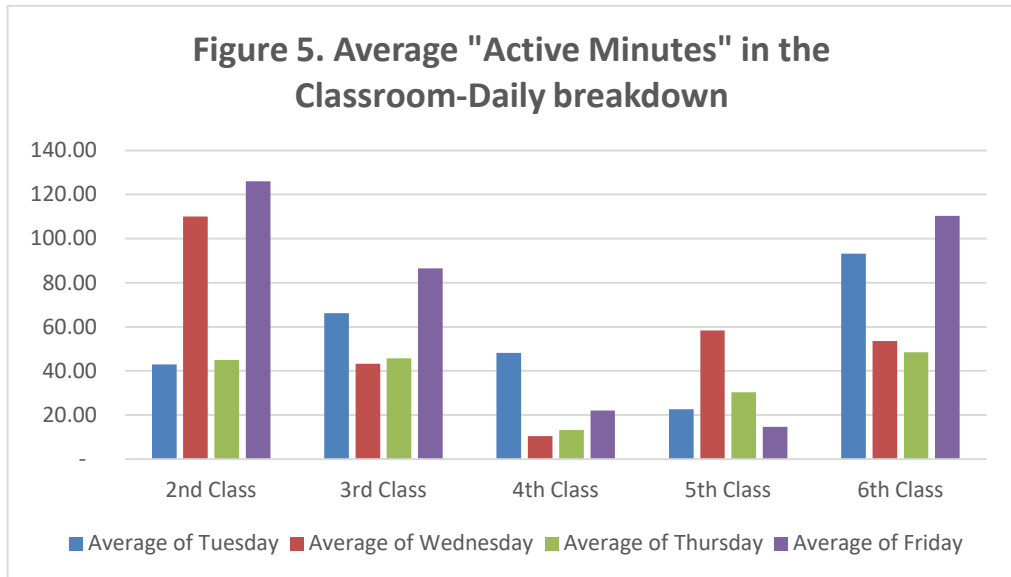
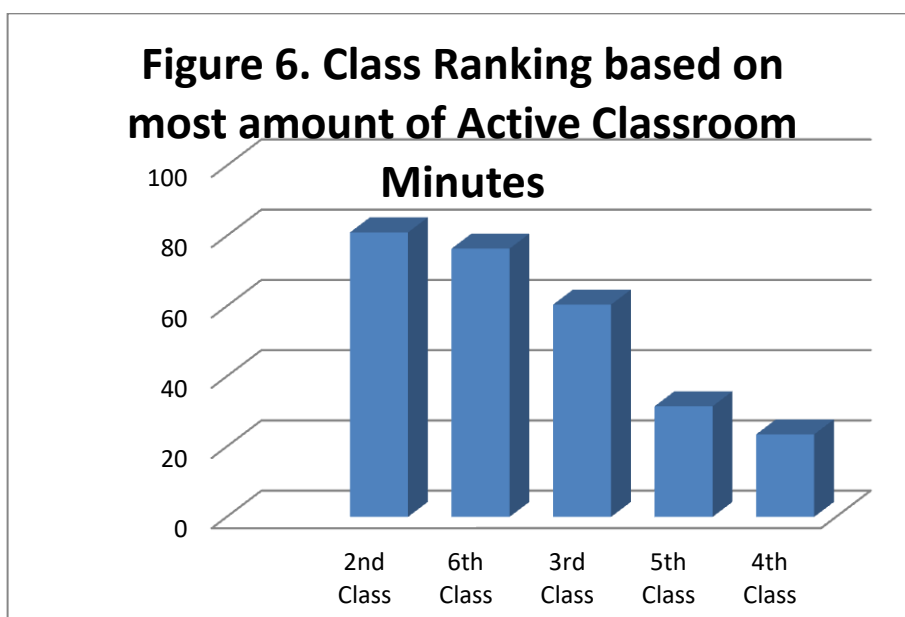


Figure. 6 below ranks the classes in order of the most amount of Active Classroom Minutes. We can see from this chart that 2nd class had the highest amount of classroom minutes followed closely by 6th class.

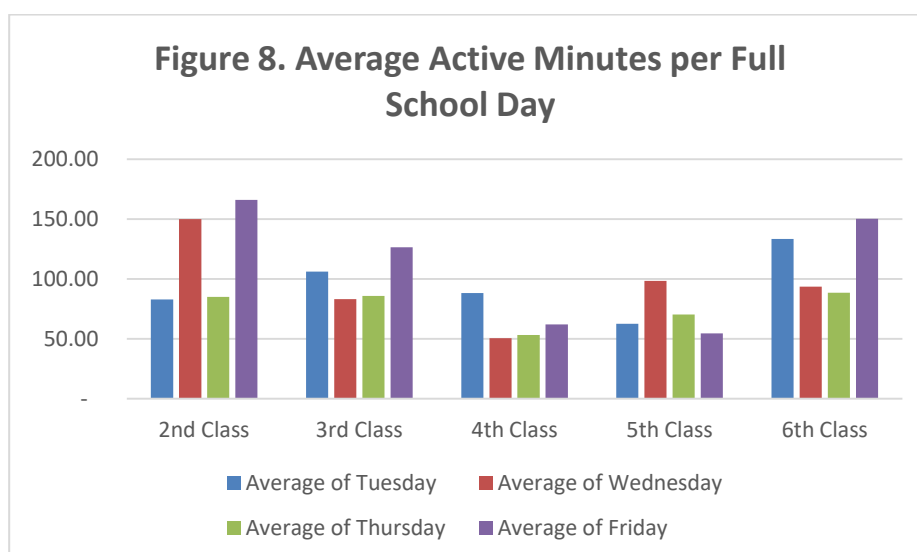


To examine it in another way we can also see how many days in the week a particular class was above or below the overall average of 51 minutes, or 17% of the Classroom Minutes. Looking at the table below (Figure 7. “Days above Overall Average Active Classroom Minutes”) we can see that 6th Class had the most consistent levels of Active classroom minutes, reaching above average on three out of the four days and just two minutes below the average on the other day. We can also see that 4th class did not reach the average Active Minutes at all over the course of this week.

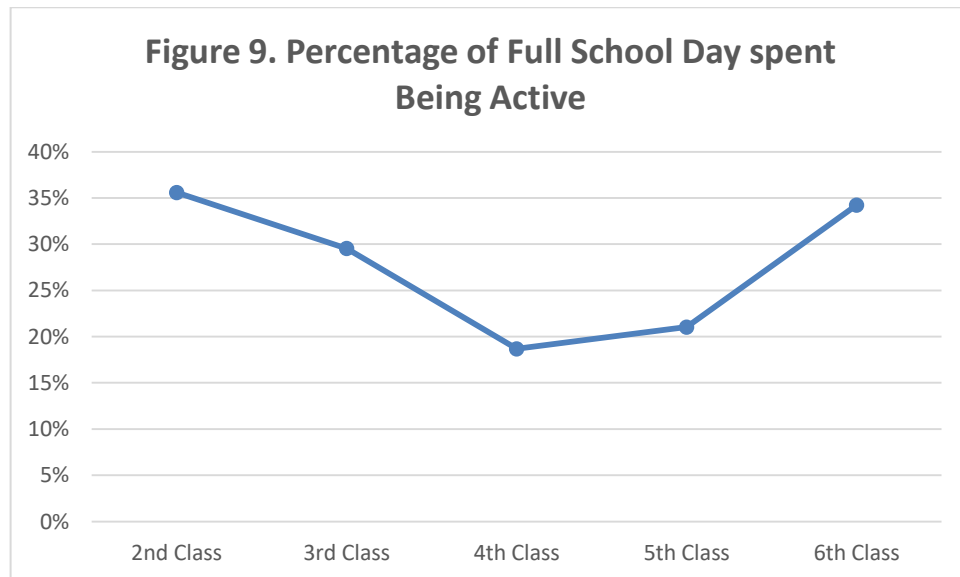
| Class | Average of Tuesday | Average of Wednesday | Average of Thursday | Average of Friday | Total Average |
|----------------------|--------------------|----------------------|---------------------|-------------------|---------------|
| 2nd Class | 43 | 110 | 45 | 126 | 81 |
| 3rd Class | 66 | 43 | 46 | 87 | 60 |
| 4th Class | 48 | 11 | 13 | 22 | 24 |
| 5th Class | 23 | 58 | 30 | 15 | 32 |
| 6th Class | 93 | 54 | 49 | 110 | 76 |
| Total Minutes | 59 | 45 | 35 | 65 | 51 |

Figure. 7 “Days Above Overall Average Active Classroom Minutes”

If we include the two daily breaks (totalling 40 minutes) into the overall minutes (Full School Day) then the overall time spent being physically active will increase as Figure 8. below demonstrates.



This gives a more accurate picture of a pupils' overall physical activity throughout a typical school day. When breaks are included this increases the children's average Active Minutes from 17% to 27% of their entire school day. This emphasises the importance of children getting the opportunity to get out and be active during their breaks. When these extra 40 minutes a day are included it leads to approximately an 11% increase per class in the amount of time the pupils get to spend being physically active as Figure 9. shows.



4.2 Qualitative Results

Regarding the factors which influence teachers' engagement in physical activity with their pupils, my study supports what the literature had discussed, the notions of accountability and performativity (where teachers feel under pressure to cover material and achieve adequate results in the areas of literacy in numeracy to the detriment of other subjects), how the overall school culture contributes to engagement with physical activity, the inadequate official curricular time assigned to physical education, among others.

The qualitative data consisted of five audio-recordings of semi-structured interviews, the transcripts from these interviews and my field-notes. As described in section 3.3 I analysed the transcripts down to sentence level and various interconnected themes

emerged. I will now discuss these themes using the three perspectives outlines in chapter 1 and in my Literature review.

4.2.1 National Policy Level

When questioned about the National Physical Activity Plan *Get Ireland Active!* none of the participants had heard about it. However they were all aware of the *Active Schools Flag* Initiative and they all spoke very highly of the active schools week in the school and the ongoing work towards attaining an active schools flag in the future. As the school where I conducted my study is not a DEIS school I did not question the participants on this policy as part of this research.

In agreement with Ratey and Hagerman (2008) 2/5 teachers were open to the idea of formal assessment of PE at primary level but with the focus being on “developmental progress” and the assessment of basic movement skills that would “benefit them in the long run” but the remaining three felt this wouldn’t be necessary at primary school level.

All teachers questioned saw the need for more official curricular time to be devoted to physical education, with Claire stating “they should be given time everyday” as “kids would definitely benefit from more exercise”. Sarah felt that some children wouldn’t be getting much exercise at all if it wasn’t for their PE classes at school:

it’s ok *here* if kids can go outside and they can go onto the pitch and they can run around....but there are schools where they’re not allowed to run around at break and that means there are days when they don’t get any exercise....I think we could do with more for schools who doesn’t have the facilities that we do. I think some of them probably wouldn’t get an opportunity to do it if it wasn’t done as much in school.

Margaret also concluded that “if they don’t participate in team sports outside of school then the hour a week probably isn’t enough”.

When questioned on what they felt got in the way of them doing more physical activity with their class all of the teachers stated “curriculum overload” or a “crowded curriculum” as the main inhibitory factor. In line with the research outlined in the Literature review in chapter 2 all participants expressed concern at being under significant pressure as a result of the National Policy on Literacy and Numeracy (Department of Education and Skills, Ireland 2011). Margaret stated that “they (English and Maths) take up a huge amount of time....it’s just crazy”. Despite 4/5 stating that they felt PE was just as valued as other subjects in their school they still all described having to give “priority to Maths and English” with Margaret describing the other subjects as “suffering”. Claire also explained how this curricular overload and time constraints impacted on her choice of teaching methodologies and strategies “it influences it big time, you get bogged down in it” and “sometimes it’s not physically possible to have them all at stations and all moving the whole time, just you’re under too much pressure with time really”.

4.2.2 School Level

In line with what the literature review described, when the participants were asked about how the overall school culture or ethos influences the amount of physical activity they were doing with their pupils, all of the participants replied that this had a significant influence on their practice. Claire stated that “It’s a really active school....there’s lots of opportunities for them to take part in different things” and Margaret responded that “we’re a sporty school...big emphasis on sport and taking part....they take part in everything that’s going on...it’s the culture in the school really”. Deborah also stated that the school culture had a very positive influence on her engagement with physical activity with her pupils “absolutely, the principal, yes, its encouraged by the while school ethos”. In line with the

concept of school culture, Margaret also mentioned that having a positive staff was also helpful so that “it wasn’t just left to one or two” not unlike the idea of Stoll’s collegiality (1998). They all spoke about how the principal ensured that they all had two 30 minute PE sessions timetabled every week with Margaret stating “it’s never one of the things left to one side”. 4/5 participants agreed that PE is just as valued as other subjects in this particular school.

When asked about the main factors that they felt helped them to engage in physical activity with their pupils 3/5 teachers agreed that they had an adequate amount of resources available to them. One aspect I hadn’t really explored until the teachers themselves spoke about it is the physical area in the school. When I had questioned the teachers about resources I only had equipment in mind but they stated that the physical area available to them in the school was a major factor in promoting physical activity in the school. The school has a large PE hall, a small Astro turf pitch, a larger grass pitch and a large yard. One teacher also spoke about the physically large size of her classroom and how this helped her to engage in physical activity with their pupils in the classroom. Technology and interactive resources such as “go noodle” were mentioned by 3/5 teachers as also helping them to be physically active with their class.

One of the aspects that was felt to negatively affect the capacity to engage with physical activity with pupils at School level was identified by Claire, a newly qualified teacher, who stated how she felt the pressure of “trying to get through books....that can be seen not to be done” and to “get through school plans”. This ties in with the concept of surveillance and accountability and Burn’s (2016) assertion that this can lead to increased pressure on early career teachers and can directly affect the methodologies used in their daily educational practice.

4.2.3 Individual Teacher Level

All of the participants stated that they enjoy doing physical activity themselves and also that they enjoy doing physical activity with their classes. All of the participants placed value on physical activity and were aware of the various physical, social or psychological benefits to their pupils with Deborah stating “they definitely concentrate better” and Claire noticing the “days when they don’t get out for their run around, wet days or days without PE, you do notice the difference in them”. 3/5 had a positive experience of physical activity when they themselves were primary school pupils and 3/5 also volunteered in doing extra-curricular physical activity in the school. Their motivation in this instance was stated as Deborah as “just enjoying getting them up and active”, Margaret stating that “everyone kind of gets involved” and she’s ”always just done a bit”. This ties in with the idea that the enjoyment of the interpersonal aspects of teaching is a primary motivating factor for teachers (Morgan, Ludlow, Kitching, O’Leary & Clarke, 2009).

As regards teacher self-efficacy, all teachers described themselves as feeling competent to teach all areas of the PE curriculum, with Claire stating “I feel I have a good basic level of skills” and Sarah stating “I don’t feel I’m an expert in a lot of areas but I know kind of a basic level”. In contradiction to *Beginning to teach* (Department of Education, 2006) 4/5 participants described their initial teacher education training in Physical Education as inadequate with Sarah and Deborah stating respectively “I think maybe we should be better trained”, “No, definitely not enough”. However Claire described her teacher training as “very good”. All of the teachers interviewed were very open to individuals from outside sporting bodies conducting coaching sessions with the children with two participants also viewing these visits as learning opportunities for themselves, Grace: “its learning for us aswell” and Deborah stating “you see it in practice as opposed to reading about it”.

Chapter 5: Conclusion

The focus of this study was to investigate the amount of time children in Irish primary schools spend sitting and how much physical activity they participate in during a typical school day. This study found that pupils in Irish primary schools sit for an average of 4 hours and 9 minutes of the school day (73%). In addition, this study also set out to explore the factors influencing Irish primary teachers' capacity to engage in physical activity with their pupils, examining this issue from three different perspectives, National level, local school level and individual teacher level, and how these combine to impact upon teachers' everyday practice. The study found these perspectives to be closely interlinked and the main conclusions I have drawn from this research are as follows;

A positive school culture is of paramount importance in promoting teachers' engagement in physical activity with their pupils. Adequate resources and professional development opportunities must be provided to teachers, especially if initial teacher education programmes were perceived as insufficient, as this can affect self-efficacy beliefs and thus influence practice. As mentioned earlier, the National physical activity plan, *Get Ireland Active!* (Department of Health, 2016) intends to include the promotion of physical activity in children as an integral component of education programmes that lead to qualifications in education by 2020.

The main conclusion I have drawn from this research is the need for official curricular time to be allocated daily to physical activity in schools. This would set a baseline of physical activity for each child to reach each day and aid in the establishment of healthy patterns for life. Now would be an ideal time to include this allocation, while the Primary curriculum is undergoing review and the need for regular physical activity by this Country's children has never been greater.

References

- Ball, S. (2003). The teacher's soul and the terrors of performativity. *Journal Of Education Policy, 18*(2), 215-228.
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioural change. *Psychological Review, 84*(2), 191-215.
- Bell, J. (2010) *Doing your research project: a guide for first time researchers in education, health and social science*. 5th edition. Open University press. McGraw Hill. New York
- Burns, G. (2016). Relationships of surveillance, assurance and recognition: Early career primary teachers' engagement with discourses of accountability and performance. *Irish Educational Studies*
- Cohen, L., Manion, L. and Morrison, K. (2011). *Research methods in Education*. 7th Edition. Routledge. Taylor and Francis group. London and New York.
- Conway, P. F., & Murphy, R. (2013). A rising tide meets a perfect storm: New accountabilities in teaching and teacher education in Ireland. *Irish Educational Studies, 32*(1), 11-36.
- Creswell, J., & Clark, V. (2009). *Designing and conducting mixed methods research* (1st Ed.). Thousand Oaks: Sage.
- Denscombe, M. (2014) *The Good research guide: for small scale social research projects*. (5th edition). Berkshire, Open University Press.

- Department of Education and Skills, Ireland. (2006). *Beginning to Teach. Report on Experience of Newly Qualified Teachers in Primary School*. Inspectorate of Department of Education and Skills, Ireland. In Touch 2006.
- Department of Education and Skills, Ireland. (2016). *Guidelines on the appropriate use of the DEIS Grant in DEIS Primary and Post-Primary Schools*. Department of Education and Skills, Ireland.
- Department of Education and Skills, Ireland. (2011). *Literacy and Numeracy for Learning and Life; The National Strategy to improve Literacy and Numeracy among children and young people 2011-2020*. The Department of Education and Skills, Ireland.
- Department of Education and Skills, Ireland (2016). *School Self-Evaluation Guidelines 2016-2020 Primary*, Department of Education and Skills, Ireland.
- Department of Health, Ireland. (2016). *Get Ireland Active! The National Physical Activity Plan for Ireland*. Healthy Ireland, Department of Health, Ireland.
- Department of Health, United Kingdom. (2011). *Physical Activity Guidelines for children and young people*. Factsheet 3. Department of Health, United Kingdom.
- Department of Health, United Kingdom. (2011). *Start Active, Stay Active- A report on Physical activity for health from the four home countries' Chief Medical Officers*. Department of Health, United Kingdom.
- Devine, D. (2011). *Immigration and schooling in Ireland: making a difference?* Manchester University Press.
- European Commission/EACEA/Eurydice, (2013). *Physical Education and Sport at School in Europe: Eurydice Report*. Publications Office of the European Union, Luxembourg.

- Layte, R. & McCrory, C. (2011). *Growing up in Ireland, National Longitudinal Study of Children, Overweight and Obesity among 9 year olds*. Dublin: Department of Children and Youth Affairs, Ireland.
- Lee IM., Shiroma EJ., Lobelo F., Puska P., Blair S., Katzmarzyk PT. (2012). Effect of physical inactivity on major non-communicable diseases worldwide: an analysis of burden of disease and life expectancy. *The Lancet*, 380(9838), 219-29.
- McManus, A., Ainslie, P., Green, D., Simair, R., Smith, K., & Lewis, N. (2015). Impact of prolonged sitting on vascular function in young girls. *Experimental Physiology*, 100(11), 1379-1387.
- Merriam, S., & Merriam, S. (2009). *Qualitative research* (1st Ed.). San Francisco: Jossey-Bass.
- Morgan, M., Ludlow, L., Kitching, K., O'Leary, M., & Clarke, A. (2009) What makes Teachers Tick? Sustaining events in New Teachers lives. *British Journal of Educational Research*. 1-18
- Ministry of Social Affairs and Health, Finland. (2015). *Reduce Sedentary time, get healthier. National recommendations to reduce sedentary time*. Ministry of Social Affairs and Health, Finland.
- National Board of Education, Finland. (2016). *Finnish Schools on the Move*. Finland National board of Education, Finland.
- National Taskforce on Obesity, Ireland. (2005). *'Obesity: The Policy Challenges'*. National Taskforce on Obesity Report. Ireland.
- Nic Gabhainn, S., Kelly, C. & Molcho, M., (2007) *The Irish Health Behaviour in School-aged Children (HBSC) Study 2006*. Health Promotion Research Centre, National University of Ireland, Galway.

- Ó Breacháin, A. & O'Toole, L. (2013) Pedagogy or politics? cyclical trends in literacy and numeracy in Ireland and beyond, *Irish Educational Studies*, 32:4, 401-419.
- O'Connor, C., Lambe, S., Gleeson, S., & Henry, A. (2016) Facilitating children's sensorimotor development in DEIS schools: relevance and recommendations. Educational disadvantage centre, Dublin.
- Punch, K. (2009), *Introduction to Research Methods in Education*. 1st Edition. Sage. London.
- Ratey, J. J. & Hagerman, E. (2008). *Spark: The revolutionary new science of exercise and the brain*. Little Brown & Company.
- Sampson, H. (2004). Navigating the waves: the usefulness of a pilot in qualitative research. *Qualitative Research*, 4(3), 383-402.
- Sattelmair, J. & Ratey, J. (2009). Physically Active Play and Cognition: An Academic Matter? *American Journal of Play*, 1:3.
- Schaff, R. C. & Miller, L. J. (2005). Occupational Therapy using a Sensory Integrative Approach for Children with Developmental Disabilities. *Mental Retardation and Developmental Disabilities Research Reviews*, 11, 143-148.
- Stoll, L., (1998). *School Culture*. University of Bath School Improvement Network's Bulletin, No. 9, Institute of Education, University of London.
- Tschannen-Moran, M., Hoy, A., & Hoy, W. (1998). Teacher Efficacy: Its Meaning and Measure. *Review Of Educational Research*, 68(2), 202.
- Tammelin, T., Aira, A., Hakamäki, M., Husu, P., Kallio, J., Kokko, S., Laine, K., Lehtonen, K., Mononen, K., Palomäki, S., Ståhl, T., Sääkslahti, A., Tynjälä, J. & Kämppe, K. (2016) Results From Finland's 2016 Report Card on Physical Activity for Children and Youth. *Journal of Physical Activity and Health*, 13 (Suppl 2), S157 -S164

- Walsh, B., & Cullinan, J. (2015). Decomposing socioeconomic inequalities in childhood obesity: Evidence from Ireland. *Economics & Human Biology*, 16, 60-72.
- Williams J., Greene S., Doyle E., Harris E., Layte R., McCoy S., McCrory C., Murray A., Nixon E., O'Dowd T., O'Moore M., Quail A., Smyth E., Swords L., Thornton M., (2009). *Growing Up in Ireland. National Longitudinal Study of Children. The Lives of 9-year-olds*. Economic and Social Research Institute & Department of Children and Youth Affairs, Ireland.
- Wilmot, E., Edwardson, C., Achana, F., Davies, M., Gorely, T., Gray, L., Khunti, K., Yates, T., & Biddle, S., (2012). Sedentary time in adults and the association with diabetes, cardiovascular disease and death: systematic review and meta-analysis. *Diabetologia*, 55(11), 2895-290
- Woods CB., Tannehill D., Quinlan A., Moyna N., Walsh J. (2010). *The Children's Sport Participation and Physical Activity Study. Research Report No 1*. School of Health and Human Performance, Dublin City University & The Irish Sports Council, Ireland.
- World Health Organization (2015). *Physical activity - Fact sheet N°385*.
World Health Organisation.

Appendices

Appendix A: Observation Grid

Appendix B: Interview Schedule

Appendix C: Information and Consent Letter for Board of Management

Appendix D: Information and Consent Letter for Participating Teachers

Appendix E: Information and Consent/Assent Letter for Children under
Observation

Appendix F: Information and Consent/Assent Letter for Children Completing
Observation Grids

Appendix A: Observation Grid

Appendix B: Interview Schedule

“SITTING IN IRISH PRIMARY SCHOOLS”

Factors Influencing Teachers’ Engagement with Physical Activity with their Pupils.

AT AN INDIVIDUAL LEVEL

1. Did you have a positive physical activity/education experience yourself as a Primary School pupil?
2. Do you enjoy doing physical activity yourself?
3. Do you enjoy doing physical activity with your pupils? Reasons....
4. Do you find it beneficial/of value to your students?
5. Do you volunteer/ engage with any extra-curricular activities involving physical activity with the pupils in your class/the school?
 - What is your motivation in this situation?
6. Do you feel confident in teaching all areas of the PE curriculum?
 - If not, which parts and Why?
 - Thoughts on initial teacher education training in PE?

AT A SCHOOL LEVEL

7. Does the overall school culture have an influence on the amount of Physical Activity you engage in with your pupils? How?
 - What initiatives is your school engaged in to promote Physical Activity? National or their own?
 - How do you feel they are working and reasons?
8. Are there enough resources provided to you?
9. Is Physical Activity/Physical Education as “valued” as much as other academic subjects by your school?

AT A NATIONAL POLICY LEVEL

10. What are your thoughts on;

- Official curricular time assigned by Department of Education and Skills to Physical Education in Primary Schools
- National Strategy on Literacy and Numeracy/Standardised testing (PISA) results- Influence on the methodologies and strategies used with children in your class?
- Have you heard of the National Physical Activity Plan "*Get Ireland Active!*"? Has it helped to promote physical activity in your school? How?

KEY QUESTION 1:

What do you feel are the main factors helping you engage in physical activity with your pupils throughout the day?

KEY QUESTION 2:

What do you feel are the main factors making it difficult to devote time to/ getting in the way of doing more physical activity with your pupils throughout the day?

General Thoughts on:

- Outside individuals from sporting bodies coming in to do coaching sessions with your class? Effect on your self- confidence in teaching PE?
- Physical Education as an officially assessed subject at Primary School Level as in other European Countries?
- Specialised teachers specifically to teach PE in Primary Schools?

Appendix C: Information and Consent Letter for Board of Management

“SITTING IN IRISH PRIMARY SCHOOLS”

STRICTLY CONFIDENTIAL

Dear Board of Management ofNational School,

My name is Máire Keogh and I am a Professional Masters of Education (Primary Teaching) student at Marino Institute of Education. I am conducting research for my Masters Dissertation concentrating on the amount of time children spend sitting throughout the day in Irish Primary School Classrooms. The study involves children from 2nd-6th class being observed in their classroom setting for four days from 13th-16th February 2017. Four Children from 3rd-6th class will also record themselves when they stand/take a break from sitting on these days. The classroom teachers of the classes involved will also complete a 15-20 minute interview comprising questions about their beliefs regarding the possible factors which may influence the amount of time spent sitting throughout the day.

I would be very appreciative if you would give your consent for National School to participate in this study by completing the form overleaf. The research process has a purely fact-finding element and will not be critical of your schools' or teachers' practice. The data gathered will only be used for the purpose of this study and all of the information gathered will be stored in a secure location. The information will be disposed of in a safe, secure and environmentally friendly fashion once the Dissertation examination process is complete. The Researcher, Máire Keogh, and her supervisor, Dr. Gareth Burns, are the only people who will have access to the data collected.

You are free to withdraw the school from this process at any stage. If you have any queries regarding the study please contact me on the number below.

Thank you for your cooperation,

Researcher Contact Details

Kind Regards,

Ph.: 089-4884533

Máire Keogh.

Email:mkeoghpme15@momail.mie.ie

BOARD OF MANAGEMENT CONSENT FORM

I have read and understand the above information.

I understand that I can ask any questions I may have at any time before or during the study.

I consent for..... National School to be included in the research conducted for the study.

I understand that the main aim of the project is to assess the length of time spent sitting by children in Irish Primary classrooms. This involves observations of the children in their classroom environment with some recording being undertaken by the children themselves.

It also involves interviews with their class teachers comprising questions about their beliefs regarding the possible factors which may influence the amount of time spent sitting.

I understand that the name of the school and other identifying information will be removed. This data will then be stored on a password protected computer and it will be used only for research purposes. The researcher, Máire Keogh, and her supervisor, Dr. Garth Burns, are the only people who will have access to this data. It will be destroyed 1 year after the study has been completed.

I understand that I may withdraw the schools' participation at any time, including after the information has been collected, without the need to provide a reason.

Name of Representative of B.O.M.: _____
(BLOCK CAPITALS PLEASE)

Signature of Representative of B.O.M.: _____

Contact telephone: _____ Date: _____

Appendix D: Information and Consent Letter for Participating Teachers

“SITTING IN IRISH PRIMARY SCHOOLS”

STRICTLY CONFIDENTIAL

Dear Participant,

My name is Máire Keogh and I am a Professional Masters of Education (Primary Teaching) student at Marino Institute of Education. I am conducting research for my Masters Dissertation concentrating on the amount of time children spend sitting throughout the day in Irish Primary School Classrooms. Your participation in this study involves a short 15-20 minute interview comprising questions about your beliefs regarding the possible factors which may influence this.

I would be very appreciative if you would give your consent to participate in this study by completing the form overleaf. The data gathered will only be used for the purpose of this study and will be stored in a secure location. My supervisor, Dr. Gareth Burns, and I are the only people who will have access to this data. The information collected will be disposed of in a safe, secure and environmentally friendly fashion once the Dissertation examination process is complete. You are free to withdraw from this process at any stage. If you have any queries regarding the study please contact me on the number below.

Thank you for your cooperation,

Kind Regards,

Máire Keogh.

Researcher Contact Details

Ph.: 089-4884533

Email: mkeoghpm15@momail.mie.ie

INTERVIEW PARTICIPANT CONSENT FORM

I have read and understand the above information.

I understand that I can ask any questions I may have at any time before or during the study.

I consent to completing a 15-20 minute interview and for this data to be included in the research being conducted for the study.

I understand that the main aim of the project is to assess the length of time spent sitting by children in Irish Primary classroom and my involvement is an interview comprising questions about my beliefs regarding the possible factors which may influence this.

I understand that my name and other identifying information will be removed. This data will then be stored on a password protected computer and will only be used only for research purposes. The information collected will only be accessed by the researcher, Máire Keogh, and her supervisor, Dr. Gareth Burns. It will be destroyed one year after the study has been completed.

I understand that I may withdraw my participation at any time, including after the information has been collected, without the need to provide a reason.

Name of Participant: _____
(BLOCK CAPITALS PLEASE)

Signature of Participant: _____ Date: _____

Contact telephone: _____

Appendix E: Information and Consent/Assent Letter for Children under Observation

“SITTING IN IRISH PRIMARY SCHOOLS”

STRICTLY CONFIDENTIAL

Dear Parent/Guardian,

My name is Máire Keogh and I am a Professional Masters of Education (Primary Teaching) student at Marino Institute of Education. I am conducting research for my Masters Dissertation concentrating on the amount of time children spend sitting throughout the day in Irish Primary School Classrooms. Your Child’s participation in this study involves being observed in their classroom setting for four days from 13th-16th February 2017.

I would be very appreciative if you would give your consent for your child to participate in this study by completing the form overleaf. No child will be identified or singled out in any way and the data gathered will only be used for the purpose of this study. My supervisor, Dr. Gareth Burns, and I are the only people who will have access to this data. All of the information gathered will be stored in a secure location and will be disposed of in a safe, secure and environmentally friendly fashion once the Dissertation examination process is complete. However, you are free to withdraw your child from this process at any stage. If you have any queries regarding the study please contact me on the number below.

Thank you for your cooperation,

Kind regards,

Máire Keogh

Researcher Contact Details

Ph.: 089-4884533

Email: mkeoghpme15@momail.mie.ie

PARENT / GUARDIAN CONSENT FORM

Name of Child: _____ Class in School: _____
(BLOCK CAPITALS PLEASE)

I have read and understand the above information. I understand that I can ask any questions I may have at any time before or during the study.

I consent to my child being included in research being conducted for the study.

I understand that the main aim of the project is to assess the length of time spent sitting by children in Irish Primary classrooms. My child will be observed as part of the class during the day and this will be recorded on an observation sheet.

I understand that our names and other identifying information will be removed. This data will then be stored on a password protected computer so that it will be available to the researcher, Máire Keogh, and her Supervisor, Dr. Gareth Burns. The information gathered will only be used only for research purposes and will be destroyed one year after the study has been completed.

I understand that I may withdraw my child's participation at any time, including after the information has been collected, without the need to provide a reason.

Name of Parent/Guardian: _____
(BLOCK CAPITALS PLEASE)

Signature of Parent/Guardian: _____ Date: _____

Contact telephone: _____

CHILD'S ASSENT FORM

Name: _____ Class in School: _____
(CAPITALS LETTERS PLEASE)

I would like to take part in the study. The purpose of the study and my participation in it have been explained to me and I have talked to my parents about taking part.

I understand that the information collected during the observations and throughout the study is strictly confidential.

I understand that I can stop taking part in the study at any time.

Signature: _____ Date: _____

**Appendix F: Information and Consent/Assent Letter for Children Completing
Observation Grids**

“SITTING IN IRISH PRIMARY SCHOOLS”

STRICTLY CONFIDENTIAL

Dear Parent/Guardian,

My name is Máire Keogh and I am a Professional Masters of Education (Primary Teaching) student at Marino Institute of Education. I am conducting research for my Masters Dissertation concentrating on the amount of time children spend sitting throughout the day in Irish Primary School Classrooms. Your Child’s participation in this study involves recording when they stand/take a break from sitting in their classroom setting between 13th-16th February 2017.

I would be very appreciative if you would give your consent for your child to participate in this study by completing the form overleaf. Your child’s recording of this data should not have a negative impact on their normal class work and no child will be identified or singled out in any way. My supervisor, Dr. Gareth Burns, and I are the only people who will have access to this data and it will only be used for the purpose of this study. All of the information gathered will be stored in a secure location and will be disposed of in a safe, secure and environmentally friendly fashion once the Dissertation examination process is complete. However, you are free to withdraw your child from this process at any stage. If you have any queries regarding the study please contact me on the number below.

Thank you for your cooperation,

Kind Regards,

Máire Keogh.

Researcher Contact Details

Ph.: 089-4884533

Email: mkeoghpme15@momail.mie.ie

PARENT / GUARDIAN CONSENT FORM

Name of Child: _____ Class in School: _____
(BLOCK CAPITALS PLEASE)

I have read and understand the above information.

I understand that I can ask any questions I may have at any time before or during the study.

I consent to my child being included in the research being conducted for the study.

I understand that the main aim of the project is to assess the length of time spent sitting by children in Irish Primary classrooms. My child will record data relating to this on an observation sheet.

I understand that our names and other identifying information will be removed. This data will then be stored on a password protected computer so that it will be available to the researcher, Máire Keogh, and her Supervisor, Dr. Gareth Burns. The information gathered will only be used only for research purposes and will be destroyed one year after the study has been completed.

I understand that I may withdraw my child's participation at any time, including after the information has been collected, without the need to provide a reason.

Name of Parent/Guardian: _____
(BLOCK CAPITALS PLEASE)

Signature of Parent/Guardian: _____ Date: _____

Contact telephone: _____

CHILD'S ASSENT FORM

Name: _____ Class in School: _____
(CAPITALS LETTERS PLEASE)

I would like to take part in and record data as part of the study. The purpose of the study and my participation in it have been explained to me and I have talked to my parents about taking part.

I understand that the information collected during the observations and throughout the study is strictly confidential.

I understand that I can stop taking part in the study at any time.

Signature: _____ Date: _____

