



Professional Masters of Education

Teachers' views on the correlation between movement breaks and student learning, concentration and classroom behaviour

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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

According to the World Health Organisation (2018), 81% of school-goers are not sufficiently active. This alarming statistic shows that it is important for children to become more active. As students spend up to six hours in school every day, the school should provide more opportunities for physical activity. The aim of this research project was to investigate “Teachers’ views on the correlation between movement breaks and student learning, concentration and classroom behaviour”. A qualitative approach was taken in order to gain a better insight into this topic area. Teachers were interviewed in two schools in Dublin. The data collected was analysed and the findings were compared to the arguments raised in the literature review. The findings revealed that, in teachers’ opinions, the use of movement breaks helped improve students’ learning, concentration and behaviour. However, this study also reveals that the teachers face a number of challenges when using movement breaks throughout the day. These include insufficient space in the classroom, limited time due to curriculum overload and a lack of resources. The suggested recommendations are increased awareness of the benefits of the inclusion of movement breaks, increased information provided to teachers about the specific movement breaks beneficial for Special Educational Needs students and for schools to implement strategic planning in both the timetable and classroom design. Further research is required to be conducted in order to extend the discussion on the impact of movement breaks in the primary school classroom.

Glossary

SEN- Special Educational Needs

Movement break: A movement break is any break that involves a person moving around and doing exercise. In the case of this study, it refers to the children being out of their chairs and being active for a period of time (Reilly, Buskist, & Gross, 2012).

Physical Activity Break: A physical activity break is another term used for a movement break. Similarly, it involves a child doing physical exercise. The terms movement break and physical activity break are used interchangeably though out this study.

Sensory Diet: A sensory diet (the use of the term diet in this context is not related to food) is a specially designed plan made by a professional for children who suffer with SEN. It is made up of different physical movements a child must complete throughout the day that will result in them becoming calmer and more regulated. A sensory diet helps children to get into the right zone so they can pay attention and learn (Biel & Peske, 2018)

Table of Contents

Title Page.....	i
Declaration	ii
Acknowledgments	iii
Abstract	iv
Glossary	v
Table of Contents	vi

Chapter 1- Introduction1

Research Rationale	1
Research Context	1
Research Aims and Objectives	2
Research Design	2
Conclusion	2

Chapter 2- Literature Review3

Physical Activity.....	4
Impact of physical activity on learning	4
Exercise helps to boost brain function.....	4
Physical activity aids concentration levels	4
The impact of physical activity on children’s behaviour	5
Physical activity and student learning	6
Physical activity initiatives in Ireland	8
National Physical Activity Plan	8
Active School Week initiative in Ireland	9
Physical Education in the Primary Curriculum in Ireland	9
Movement breaks as a strategy in achieving greater physical activity	10
Intensity of movement breaks	11
Aerobic movement breaks and academic based movement breaks	12
Including children with special educational needs in movement breaks	13
Challenges to the delivery of physical activity in the Irish primary schools	14
Teacher’s role in providing physical activity in the classroom	14

Conclusion	16
Chapter 3- Methodology	17
Introduction	17
Philosophical underpinnings	17
Research Approaches	18
Data collection	18
Sampling	19
Ethical issues	20
Implementation	21
Data analysis	22
Limitations	23
Conclusion	23
Chapter 4- Discussion of Findings	24
Introduction	24
Teachers' attitude towards movement breaks	24
Teacher training in the area of physical activity and movement breaks	26
Teachers' confidence with incorporating and implementing movement breaks in the classroom	27
Student outcomes of using movement breaks in the classroom	28
Children find it easier to concentrate after a movement break	28
Improved behaviour after movement breaks	29
Movement breaks help to improve focus among the children	30
The link between movement breaks and academic performance	31
Movement breaks and children with SEN	31
Reduced anxiety among students with SEN after practising in movement breaks	32
The challenges of incorporating movement breaks into the school day	33
Curriculum overload and time	33
Space/Health and safety issues	34
Fear of the children not setting into the next lesson	35
Conclusion	36

Chapter 5- Conclusion and Recommendations	37
Introduction	37
Summary of Findings	37
Recommendations for practice and future research	38
 Reference List	 40
 Appendix 1: Letter to principal of local primary school seeking permission to conduct research	 45
Appendix 2: Letter to the teachers requesting them to take part in the research	46

Chapter 1- Introduction

The purpose of this Chapter is to set out the rationale, context, aims and objections and the design of this research study. The topic the study seeks to examine is “Teachers’ views on the correlation between movement breaks and student learning, concentration and classroom behaviour”.

Research Rationale

Movement breaks allow children to regulate themselves which leads to better behaved, more engaged students (Fiore, 2014). During these breaks children can release their energy that has built up in an appropriate way. Many benefits have emerged from the use of movement breaks in the classroom and, therefore, it is important to examine whether Irish students have or could benefit from these movement breaks during the school day.

Research Context

In order to examine and discover answers to the research topic, research for the study was conducted through interviews with primary school teachers in two primary schools in Dublin. There appears to have been little research carried out on this topic in an Irish setting. Thus, the researcher felt that there was a justifiable research opportunity to conduct this small scale study amongst teachers to obtain their perspectives on the topic of the use of movement breaks in the primary school classroom. This was central to this research study given their insight into teaching pedagogies and place at the centre of the teaching process.

Research Aims and Objectives

It has been argued that the incorporation of physical activity in the classroom is essential for children's health, improved concentration and better behaviour (Ratey, 2008). The primary aim of this research study was to examine the impact of using movement breaks throughout the school day on student learning, concentration and behaviour. Three objectives can be established from this primary aim. Firstly, to investigate teachers' views on use of movement breaks in the classroom. Secondly, to investigate whether teachers are trained effectively to use movement breaks and are they equipped with the necessary resources. Thirdly, to explore the challenges that movement breaks can present for teachers in the primary school classroom.

Research Design

A qualitative approach was taken for this research as it was considered that this method would give a deeper insight to the research topic. Semi structured interviews were the chosen data collection method. Interview questions were formed based on the current literature around the research topic in order to discover teachers' views and attitudes on the topic. A pilot interview was carried out in order to test out the interview questions and appropriate amendments were made. Once all of the data was collected it was analysed using the coding process and discussed in relation to the literature.

Conclusion

This chapter has outlined the aims and objectives of the study. It set out the rationale for the research, the context in which it takes place and notes the research design chosen for the study.

Chapter 2- Literature review

Research topic: Teachers' views on the correlation between movement breaks and student learning, concentration and classroom behaviour.

The focus of this study is to examine the correlation between movement breaks and students' learning, concentration and classroom behaviour from teachers' perspectives. This literature review will examine relevant studies carried out globally and nationally to consider teachers' perspectives on movement breaks in the classroom. There will be a particular emphasis on the effect movement breaks have on children with Special Educational Needs. However, there are some studies with contrasting views and there are a number of challenges teachers face when including movement breaks in the classroom.

Physical activity

Physical activity is any movement made by the body including walking, cycling, dance as well as sports and planned exercise (Department of Health , 2018). Physical activity is extremely important as it reduces the risks of noncommunicable diseases (World Health Organisation, 2018). According to the World Health Organisation (2018) 81% of school-going adolescents are not active enough. Armstrong and Welsman (2006), show that patterns of regular physical activity start at a young age and gradually begin to reduce when children reach adolescence. It is therefore important that schools make an effort to increase the amount of physical activity in schools and create a positive view around it with the hope of children continuing to practice regular physical activity

Impact of physical activity on learning

The literature reviewed for this study revealed a wide array of outcomes on children's learning arising from their engagement in physical activity. These included the impact of physical activity on brain function, concentration, behaviour and academic performance.

Exercise helps to boost brain function.

According to Ratey (2008), exercise grows brain cells. During physical activity biological changes occur in the brain that enhance adaptability and connections between brain cells (Reilly, Buskist & Gross, 2012). When children engage in physical activity, they are better prepared to learn as they are more focused and motivated. They have released energy that makes them less fidgety during lessons (Ratey, 2008). Jenson (2009) states that there are negative effects on the body when sitting for long periods of time. These include stress, reduction of circulation and lower back aches. Jenson (2009) also argues that children's mental health can suffer from experiencing these negative effects. It is, therefore, very important for children to receive opportunities for physical activity throughout the day, in order to increase their capacity to learn and reduce any stresses they may have.

Physical activity aids concentration levels.

Physical activity breaks are often incorporated by teachers into the school day in order to improve children's concentration. Young children find it very difficult to concentrate for long periods of time and, therefore, their body craves movement in order to maintain alertness (Cosgrove, McKeown, Travers, Lysaght, Ní Bhroin & Archer, 2014). These movements include fidgeting, standing or moving about the room (Jarrett,

Maxwell, Dickerson, Hoge, Davies & Yetley, 2010). All of these moves cause disruptions to the lesson. However if planned movement breaks are incorporated into lessons, this will eliminate the child becoming restless and result in them being more concentrated on the task (Jarrett et al., 2010). Movement breaks throughout the day helps to maintain the children's alertness and, therefore, the learning is more effective (Reilly, Buskist, & Gross, 2012).

Often teachers think that after these physical activity breaks, the children will find it difficult to settle back into the next lesson (Reilly, Buskist, & Gross, 2012). However, it is important for teachers to include movement breaks throughout the day on a regular basis, so the children know they will be given an opportunity to move and that they are expected to settle back quickly into work afterwards (Reilly, Buskist, & Gross, 2012). This study argues that the children will become better at the transition from work to movement break back to work, the more regularly these breaks are given to them.

However, Goerg (2016) carried out a study to investigate the effects of purposeful physical activity on student concentration which has contrasting views to Jarrett et al., (2010). This study observed primary school children before, during and after physical activity. According to the mean, median, and mode of the daily pre- and post-implementation there is little change, which suggests the movement breaks made little to no difference in concentration levels over the course of the intervention.

The impact of physical activity on children's behaviour.

Movement breaks allow children to regulate themselves which leads to better behaved, more engaged students (Fiore, 2014). During these breaks children can release

the energy that has built up in an appropriate way. Fiore (2014) argues that these breaks result in less fighting and bullying as children have released their energy appropriately during breaks. Evans, Evans, Schmid and Pennypacker (1985) reported a lower rate of inappropriate behaviour among 6th, 7th and 8th grade children who were participating in physical activity. Their study concluded that most exercise interventions for example jogging and football reduced disruptive behaviours among students.

Similarly, Jarrett et al. (2010) carried out a study in Georgia (USA) to explore the effects an activity break can have on classroom behaviour in a 4th grade classroom. This study's results show that the students displayed more on-task behaviour and less fidgeting on days with a scheduled activity break compared to the days that had no activity breaks (Jarrett et al., 2010). Mahar et al. (2006) further explored activity breaks in the classroom and concluded that giving students a ten-minute activity break throughout the day increased their on-task behaviour by an average of 8%. However, it can be argued that this is a small-scale study, and it is recognised by the authors that there is a need to carry out more research on this topic area.

Physical activity and student learning.

Howie and Pate (2012) argue that the primary aim of schools is the academic performance of students. Physical activity is often compromised by schools' prioritisation of academic subjects (Howie & Pate, 2012). In terms of the Irish Primary school curriculum, physical education is allocated a one hour slot which is the same as the arts education subjects and the social, environmental and scientific education subjects (NCCA, 2016). However, in 2011 the Department of Education and Skills requested that schools increase the time spent on literacy and maths which reduced teachers' flexibility in the allocation of time for each subject (NCCA, 2016). Reilly, Buskist and Gross (2012)

argue that there is little evidence that exists to show that the extra time spent on academic subjects is beneficial to student achievement. However, several studies indicate that physical activity during school hours can benefit academic performance for children (Howie & Pate, 2012; Donnelly & Lambourne, 2011). These studies argue that physical activity can have both immediate and long-term benefits on academic performance. Almost immediately after engaging in physical activity, children are better able to concentrate on classroom tasks, which can enhance learning (Howie & Pate, 2012).

Howie and Plate (2012) state that the results from studies carried out on the correlation between physical activity and academic performance continue to be positive. The increase in physical activity leads to an increase in cognitive function and academic achievement. Ahamed et al. (2007) carried out a study on Canadian children in 4th and 5th grade to investigate the link between physical activity and standardized test performance. This study presented that children who previously scored below their grade level and were involved in a physical activity programme scored higher on standardized tests compared to those who did not participate in the programme. Physical activity has positive influences on concentration, memory and classroom behaviour (Ahamed et al., 2007). This study concludes that increased time allocated to physical activity does not affect academic performance negatively. Kohl and Cook (2013) carried out a similar study to Ahamed et al. (2007) that concluded that the frequency and duration of physical activity had a positive impact on the results of the students' standardized test performance.

Han (2018) produced recent research with similar results to both Ahamed et al. (2007) and Kohl and Cook (2013). Han (2018) investigated the relationship between physical fitness and academic achievement among students in South Korea. Using a

random sampling method, Han (2018) found that students with higher levels of physical fitness are more likely to achieve higher academic performance. The results from this study suggest that there is a need to develop a more effective physical education curriculum. In relation to Ireland, Dillon et al. (2013) suggest that the time allocated to physical education in the primary school classroom needs to increase in order to see the benefits of physical activity.

However, in contrast with the studies mentioned above, Everhart, Dimon, Stone, Desmond and Casilo (2010) investigated to identify if student academic performance could improve if their students were allowed to have a movement break before academic sessions. The study was conducted on students in primary and intermediate grades. The results were not consistent among all of the students studied, the primary students did not show academic progress that would indicate a true correlation between physical activity and academics.

Physical activity initiatives in Ireland

Scheduled physical education is not the only time in the school week that children have the opportunity to be active. There are opportunities for the children to be active throughout the day. The Government have created some initiatives for schools to get involved in, in order to promote physical activity and the benefits of increased physical activity.

National Physical Activity Plan.

The Irish Government has realised the multiple benefits physical education can have on the mind and body and have produced the National Physical Activity Plan as a response (Healthy Ireland, 2016). The aim of this plan is to reverse the trends of physical

inactivity and sedentary behaviours (Healthy Ireland, 2016). The plan recognises the role that schools play in providing physical activity for students, but it does not outline or make recommendations on how teachers should provide physical activity in the classroom. The plan states that in school, children develop the knowledge, skills and positive attitude that support and enable children to lead physically active lifestyles (Healthy Ireland, 2016). However, this is not directed solely at education, it is a national recommended strategy to improve physical activity as a nation (Healthy Ireland, 2016).

Active School Week initiative in Ireland.

As a response to the National Physical Activity Plan, the Department of Education and Skills and Healthy Ireland have sponsored a programme - Active School Week - that takes place in primary schools, secondary schools, special schools and Youthreach centres across Ireland. This initiative is aimed to provide fun and inclusive physical activity to all members of the school community (Department of Education and Skills, 2016). Active School Week allows the opportunity to raise awareness about the benefits of physical activity. Children engage in fun physical activities throughout the active week and teachers are challenged to find ways to teach subjects in a more physically active way (Department of Education and Skills, 2016). One criticism of this initiative is that there is huge emphasis on physical activity for one week only. However, the Government responded to this issue by rewarding schools that stay continuously active with an Active School Flag (Department of Education and Skills, 2016).

Physical Education in the Primary Curriculum in Ireland

Physical activity in Irish primary schools is primarily linked to the Physical Education curriculum. The current Physical Education curriculum in Ireland is comprised

of six strands. These strands are athletics, dance, gymnastics, games, outdoor and adventure, and aquatics. The curriculum states that ‘Physical education meets the physical needs of the child and the need for movement experiences, challenges and play’ (NCCA, 1999, p2). The children develop the skills of strength, speed, balance, and co-ordination through movement. Currently, there is allocation for one hour of planned physical education in the primary school curriculum (NCCA, 1999a). Teachers plan and implement this one-hour slot, or two half hour slots each week, thereby possibly leaving children without activity on three to four school days each week. According to the Irish primary school curriculum “Physical education provides children with learning opportunities through the medium of movement and contributes to their overall development by helping them to lead full, active and healthy lives” (NCCA, 1999, pg. 8a). It is important for children to gain enjoyment from physical education lessons in order to promote a positive attitude towards physical activity (NCCA, 1999b).

As the Department of Education and Skills have indicated the many benefits of physical education, an increased amount of physical activity should be provided for students during the school day (Howie & Pate, 2012). However, there is no structure for physical activity breaks in the curriculum and it is up to the teacher’s discretion on whether they include it throughout the day for the children. Donnelly et al. (2013), conducted a study on rigorous physical activity incorporated into the daily curriculum. The intervention was performed over a 3-year period and students received one hundred minutes of physical activity each week. This article makes a strong argument for why schools play such an important role in teaching health and lifetime fitness to children.

Movement breaks as a strategy in achieving greater physical activity

Movement breaks can be referred to as the short breaks allocated to physical activity in the classroom (Reilly, Buskist, & Gross, 2012). Recent evidence has discovered ways to introduce physical activity into learning activities that were either designed to promote learning through physical activity or provide students with a pure activity break (Center for Disease Control and Prevention, 2010). Many benefits of movements breaks have been reported. Lengel and Kuczala (2011) state that movement breaks are responsible for efficiency in learning. During movement breaks, the brain is able to process the new information learned before engaging in the next lesson (Donnelly & Lambourne, 2011). Educational research suggests that the majority of school children are predominately kinaesthetic learners and, therefore, crave movement to understand new concepts (Lengel & Kuczala, 2011).

The intensity of movement breaks.

Hillman et al. (2009) carried out a study that showed that children who performed twenty minutes of vigorous walking as a movement break throughout the day improved their attention and performed better on academic tests, compared to the group that rested for twenty minutes. This study suggests that single bouts of moderately-intense aerobic exercise can improve attention and academic performance. Coe et al. (2006) have contrasting views to Hillman et al. (2009) and argue that moderate activity does not have an impact on student achievement. However, their study shows that vigorous physical activity was associated with higher academic achievement. Therefore, the intensiveness of the activity performed contributes to the level of academic achievement among children (Coe et al., 2006). This study concludes that there is a need to provide more vigorous physical activity during the school day. However, it is important to note that

this was a small-scale study, which shows a small representation of students worldwide, and, therefore, it cannot be generalised. It is recommended by the researchers that more studies should be carried out in order to identify the effectiveness of movement breaks in the classroom.

Aerobic movement breaks and academic-based movement breaks.

Positive evidence for aerobic activity breaks and academic-based activity breaks have been found in studies. Some research suggests that the type of activity break has an effect on the children's behaviour and academic performance (Donnelly et al., 2009; Kibbie et al., 2011). Aerobic activity breaks involve the students being fully engaged in physical activity that has no connection to an academic subject (Fedewa et al., 2018). The break is solely focused on physical activity. This is compared to academic-based activity breaks where the students engage in movement breaks that integrate academic subjects.

GoNoodle is one online tool that helps teachers to provide movement breaks in the classroom. This tool offers a range of breaks including both aerobic and academic based movement breaks. Lotta (2015) carried out a study evaluating how the use of this tool in the classroom affected children's learning and behaviour. Some interesting findings emerged from her study: as a result of the movement breaks, students were less tired and had more stamina during the lessons after the break. In addition, some of the students' grades increased after they took part in the movement breaks (Lotta, 2015).

Fedewa et al. (2018) argue that it is unclear whether academic based breaks are beneficial as the student's brain is still continuing to process new information, whereas during aerobic based activity the brain is in a state of "mental rest" or "reflection" (pg.

145). Fedewa et al. (2018) conclude that when the children engaged in aerobic activity breaks, there was a greater increase in academic performance, particularly in mathematics and reading, compared to the children who participated in academic activity breaks.

Including children with special educational needs in movement breaks.

It is important for teachers to include children with special educational needs in movement breaks. Often it is most needed among children with special educational needs (McMinn, Rowe, & Trim, 2011). For example, some children with ADHD find it difficult to sit still for long periods of time and, therefore, it is essential for the teacher to provide small movement breaks for these children in order to release stress (Sousa, 2016). McMinn, Rowe and Trim (2011) carried out a study to evaluate the effectiveness of movement breaks on children with SEN. This study concluded that the allocation of these movement breaks had a positive effect on the children's behaviour and they became less agitated and more focused on the task. McLaren et al. (2011) further state that some students with SEN will face challenges with certain movement breaks or activities. It is important for the teacher to adapt these breaks or activities to cater for gross or fine motor impairments (McLaren et al., 2011).

Some children experience sensory processing issues and these issues can compromise learning and functioning on a daily basis. Sensory processing problems often occur in conjunction with many different diagnostic labels (Biel & Peske, 2018). These children need help to learn how to self-regulate, adapt, and overcome (Biel & Peske, 2018). Every child with sensory processing issues has unique sensory issues so it is important to find what each individual child needs in order to self-regulate. For example, some children may like deep pressure under a heavy mat, or slow swinging. A sensory

diet can be created by an occupational therapist, teacher and parent. This sensory diet is made up of different movements a child must complete throughout the day that will result in them becoming calmer and more regulated. A sensory diet helps children to get into the right zone so they can pay attention and learn (Biel & Peske, 2018). It is, therefore, important that teachers implement these specified movement breaks throughout the day in order to regulate children who have sensory processing issues. Edelson, Edelson, Kerr & Grandin (1999) carried out a study and found that autistic children benefited from having a deep pressure massages twice a week. This deep pressure had a behavioural and physiological calming effect with significant reduction in tension and a slight reduction in anxiety.

Challenges to the Delivery of Physical Activity in Irish Primary Schools

There are many challenges facing teachers when incorporating movement breaks in the classroom. Teachers' attitude towards physical activity, classroom space and time are all challenges that teachers currently face.

Teacher's role in providing physical activity in the classroom.

In Ireland, Fifth and Sixth classes use a largely subject-based curriculum (NCCA, 2016). Kohl and Cook (2013) argue that children in these classes often sit inactive for periods up to 50 minutes and advise that these long periods of inactivity should be avoided. It is, therefore, essential for the school to provide opportunities for physical activity outside of the planned physical education lesson. However, the delivery of physical activity depends on the teacher and their personal motivation to use physical activity in the classroom. Teachers play an important role in creating a learning environment that nurtures the child's development (Healthy Schools, 2005). Each teacher

has their own unique style, but it is important that they allow for physical activity throughout the day.

Al-Oun and Qutaishat (2015) argue that teachers' attitudes play a significant role in guiding and developing their teaching behaviour. These attitudes influence the teacher's choice of action and how they approach subjects. The Al-Oun and Qutaishat (2015) study shows that teacher factors including personality and intelligence contribute to the overall effectiveness of teachers. Caprara et al. (2006) explore how teachers' beliefs and values affect students' academic achievement. These beliefs and values shape the learning environment for students and influence student motivation (OECD, 2009). Professional competence is considered to be a crucial factor in classroom practices, therefore instructional practices depend on what teachers bring to the classroom.

McMullen, Kulinna and Cothran (2014) carried out a study to explore classroom teachers' perspectives on incorporating physical activity breaks into their classroom. This study identified that teachers prefer activity breaks that are easy to manage, quick and have an academic link. This study was particularly interesting in light of the chosen methodology for this research project. McMinn, Rowe and Trim (2011) suggest that primary school teachers do not use movement breaks in the classroom due to lack of time, education and resources. The issue of space constraints in the classroom was a challenge mentioned in both McMullen, Kulinna & Cothran (2014) and McMinn, Rowe & Trim (2011) studies. Braniff (2011) argues that primary school teachers need more training on movement breaks in order to implement them properly into their classrooms. He also suggests that there is a need for more research to be conducted in order to investigate the

various resources and activities available for movement breaks and implement these into their own classrooms.

Class size is another issue facing teachers at present. Currently, the average primary class sizes in Ireland are about 25, the second highest in the EU and well above the EU average of 20 (OECD, 2018). With larger class sizes, teachers find it challenging to manage all children while they are out of their seats, and, therefore, prefer to use easy to manage breaks in the classroom (McMullen, Kulinna and Cothran, 2014).

Conclusion

This literature review was carried out to develop the researcher's understanding of the context of this research topic, as well as deepening the awareness of current practices and ideologies around the topic of movement breaks. Global studies carried out concluded that there are many benefits of using movement breaks throughout the school day. These benefits include greater student learning, better concentration levels and improved classroom behaviour. Some of the studies argued that teachers faced a number of challenges when incorporating movement breaks into their classroom. These included teachers' attitudes to physical activity, time constraints, space and health and safety concerns. This literature review also included divergent studies that have shown there is no effect of movement breaks and academic performance. There is limited research in the area of movement breaks in the classroom and how movement breaks affect academic achievement and student behaviour in the primary school classroom and, therefore, there is an opportunity for more research to be conducted. There is also a lack of Irish research available that explores the views of primary school teachers on movement breaks in the classroom.

Chapter 3- Methodology

Introduction

The title of this study is ‘Teachers’ views on the correlation between movement breaks and student learning, concentration and classroom behaviour’. This Chapter examines the considerations involved in the choice of research strategy, relevant methodologies and the evaluation and analysis approaches involved for the research question of this study.

Philosophical Underpinnings

According to Creswell (2009) there are four philosophical world views. These are identified as Postpositivism, Social Constructivism, Advocacy and Pragmatism. The types of beliefs held by an individual can affect their approach to research leading them to use either quantitative, qualitative or mixed methods research (Creswell, 2009). In the context of this study, a Social Constructivist view was taken as it was deemed most suitable. This view explores the ways people interpret and make sense of their experiences (Cohen, Manion, & Morrison, 2011). This view will ensure that the aims and objectives of this research project are met as teachers will provide their views and experiences of using movement breaks in the classroom.

Research Approaches

There are three types of research approaches: qualitative, quantitative and mixed methods. Denzin and Lincoln (1994) states that qualitative research occurs ‘where researchers study things in their natural settings, attempting to interpret or make sense of phenomena in terms of the meaning which people bring to them (p.2). Qualitative

research provides descriptive data for the researcher and often contains important quotations said by informants on the research topic (Bogdan & Biklen, 2006). Quantitative research gathers data in a numerical form which can be put into categories and aims to establish general laws of behaviour and phenomenon across different contexts (Lankshear & Knobel, 2004). Mixed methods is an approach that involves collecting both qualitative and quantitative data, providing a more complete understanding of a research topic (Creswell, 2012).

A qualitative method was chosen for this research project as it was considered that this method gives a deeper insight to the research question. This type of research method allows the researcher to discuss the research topic with teachers and gain knowledge on their thoughts and feelings of using movement breaks throughout the school day. In contrast to quantitative research, qualitative research allows the researcher to capture the individual's perspective on the research topic, providing richer content for the project (Creswell, 2012).

Data Collection

Interviews are one of the main ways of collecting qualitative data (Mertens, 2015). They are a straight forward way of collecting factual information about more complex and subtle phenomena (Denscombe, 2010). Interviews allow the researcher to gain insight into people's feelings, experiences, emotions and opinions. Semi-structured interviews were chosen as the qualitative method of data collection for this study. One major advantage of carrying out a semi-structured interview is its adaptability (Bell, 2010). During the interview process, if topics of interest are raised, the researcher is able to follow up on ideas, probe responses and investigate feelings on certain issues. These

types of interviews enhance the integrity of the data and allows the researcher to delve more deeply into responses (Benes, Finn, Sullivan, & Yan, 2016). Semi-structured interviews were carried out for this study in order to develop further ideas and clarify certain issues the teachers may face when incorporating movement breaks in the classroom.

McMullen, Kulinna and Cothran (2014) carried out a similar study to find out teachers' views on using activity breaks in the classroom. For their study, they used semi-structured interviews as it was deemed the most suitable method for collecting their data. They asked the teachers a list of questions but were flexible when points of interest came up and further questioned them on these points. Similarly, the author chose semi-structured interviews in this research study as they allowed for a variety of teachers' perspectives, providing a broad range of interesting views on the research topic.

Sampling

In order to collect appropriate data on the research topic, a suitable sample must be chosen. This study used purposeful sampling. Purposeful sampling involves the researcher using their judgement to choose participants for the specific qualities they bring to the study (Lankshear & Knobel, 2004). This form of sampling provides more specific and directly relevant data to a research topic. Thus purposeful sampling is the most suitable option for this research project due to the short time-frame for collection, analysis and reporting of the data.

Eight teachers from two primary schools in south Dublin were chosen for the sample in this study. The author, while on teaching placements, had discussed the topic

of movement breaks with these teachers before the study. All eight teachers used movement breaks in their classrooms. These two primary schools were chosen due to logistics and time constraints; they were in a geographically convenient location for the researcher. The teachers from both schools are of mixed ages and have been teaching for a varying amount of years, therefore giving a broad range of experience levels. This was an important aspect for the study as it investigated the use of movement breaks in the classroom by primary school teachers.

Firstly, a letter was sent to both school principals in order to gain access to the schools to carry out the research. This letter, which can be found in Appendix A, explained the research to be carried out and its aims and objectives. Once permission was granted by the school principals, letters were then sent to all eight teachers seeking their consent to take part in the research. An example of this letter can be found in Appendix B. These primary schools provided a small sample size which suited the small scale nature of this study.

Ethical Issues

Marino's Ethical Guidelines were adhered to by the author during the data collection process. As explained above, before interviewing teachers, a letter of informed consent was first sent to the principal of each school and then to the teachers who participated. This letter of consent explained the nature of the research being conducted, their involvement in it and how the research will be used. Participation in this research was entirely voluntary and participants had the right to withdraw at any stage. No incentives were given or offered in exchange for participation in the interviews. I carried out level one research for this thesis and it is important to note that no individual under

the age of 18 or any vulnerable adult was observed or interviewed which is in accordance with Marino' Institute of Education's Ethical Guidelines when carrying out level one research. All data collected was password protected and confidential. No individual was identified or named in the study, instead they were given numeric pseudonyms.

Implementation

Pilot Interview: A pilot interview was organised with one teacher from one of the chosen primary schools. It was important to carry out a pilot interview as it allowed the researcher a chance to test out the questions and revise them if necessary, for example how long the interview was going to last, and whether the structure and order of the questions were coherent. In terms of this study, the pilot interview received some positive feedback. One teacher explained that the list of questions flowed, and each question was very clear. However, this teacher raised some interesting points resulting in the interview lasting longer than the intended time. This feedback was valuable, and I explained to the teachers interviewed subsequently that the interview would last around thirty minutes, but it may run longer if points of interest came up. One question was deleted from the original interview questions due to repetition of an earlier question.

Interviews: The researcher developed an interview schedule specifically for this study. The aim of the interview questions was to gain a better understanding of the teachers' views on using movement breaks throughout the day. Eight teachers were chosen to participate in a semi-structured interview process based on their use and experience of using movement breaks in the classroom. The author had previously discussed movement breaks with these teachers which resulted in them being suitable candidates for the study. The interviews took place in the morning or after school in each

teacher's classroom as it was the quietest part of the school. Each interview was voice-recorded and transcribed after the interview process.

Data Analysis

After data collection, qualitative researchers conduct a data analysis to compile and interpret their findings. Cohen, Manion and Morrison (2011) state that qualitative data analysis involves organising, accounting for and explaining the data. As a result of this process, patterns, themes and categories emerge. In the context of this research, interviews were the data collection tool chosen and each interview was transcribed in order to be analysed. It is important to note that the transcription conventions were followed for each transcription (Cohen, Manion & Morrison, 2011). These conventions provide prosodic detail for the reader's visual inspection for example intonation, emphasis, lengthening and non-verbal feedback.

A grounded theory approach was taken when analysing the data. Strauss and Corbin (1994) states that 'grounded theory is a general methodology for developing theory that is grounded in data systematically gathered and analysed' (p273). After transcribing the interviews they were coded. Coding is a method that helps to establish similar information that occurs in the interview process (Denscombe, 2010). Each line was numbered to make it easier for the researcher to code the information. Colours were assigned to each code to make them clearer and also to identify any patterns. The codes were determined by recurring pieces of information in the interviews as well as referring back to the research question. After the coding process, themes were recognised and lists of similar codes were assigned to each theme. Major themes and subthemes were devised. Each theme was analysed, discussed and linked back to the literature. It is important to

note that after the data analysis process, the author slightly amended the literature review in light of what came up in the interviews.

Limitations

This research project had a short time frame for completion, which meant that the sample size of participants was limited. Eight interviews were carried out for this study. This small scale study gave some insight into the research topic, yet due to the small sample size, it is accepted that these results cannot be generalised.

Conclusion

This Chapter has outlined the four world views that individuals consider when carrying out research as well as a clear rationale about the chosen world view of social constructivism. Research methods and interviews as a tool for data collection were also examined. The researcher explained purposeful sampling and the compliance with Marino's Ethical Guidelines. The data analysis process was clarified, and some limitations were discussed. The next chapter will discuss the data which emerged from the semi-structured interviews.

Chapter 4- Discussion of Findings

Introduction

This Chapter will focus on the results of the research attained through conducting eight semi-structured interviews. Many themes emerged from the interviews which gave a better insight into the research study of “Teacher’s views on the correlation between movement breaks and student learning, concentration and classroom behaviour”. All of the themes that emerged from the data will be discussed in relation to the research previously carried out through the literature review. The findings from the data will be presented in four main sections:

1. Teachers’ attitudes towards movement breaks
2. Outcomes of movement breaks
3. Movement breaks and children with SEN
4. Challenges to implementing movement breaks

1. Teachers’ attitudes towards movement breaks

The teachers interviewed in this study recognised physical activity as a significant part of the primary school day. The Department of Education have identified the many benefits of physical activity throughout the day and have advised for the increase of physical education in the classroom (Department of Education and Skills, 1999). All teachers who took part in this research project believed that physical education holds a very important place in the classroom. One teacher expressed the view that *‘physical activity is a central part of the primary curriculum and should be incorporated into every primary school classroom’*. All eight of the teachers interviewed held a strong positive attitude towards the use of physical education in the classroom. When Teacher 2 was

asked why she thinks it's important to use physical activity in the classroom, she answered: *It is important to develop the overall health and well-being of the children and maintain the human body through exercise. It also helps develop their social, emotional, physical and cognitive development.*

In relation to the literature, this finding reflects similar views to the teachers in a study conducted by Al-Oun and Qutaishat (2015) to investigate classroom teachers' attitudes towards incorporating physical activity breaks into their classroom. The teachers in their study expressed positive attitudes towards physical activity in the primary school classroom. Al-Oun and Qutaishat (2015) argue that these attitudes play an important role and are the motivation behind the inclusion of physical activity in the classroom.

These results were similar to the research study in question and one teacher in this study stated that *'I don't believe that children should be sitting for long periods of time, movement breaks should be given to allow the children to release built up energy and refocus their mind'*. This teacher's positive attitude towards physical education was one of the main reasons for incorporating these breaks in her classroom. This data suggests that teachers who hold positive attitudes towards physical education are the teachers that will continue to use movement breaks in their classrooms on a daily basis. Teacher 4 explained how she is very active and believes that being active is extremely important in everyone's lives. Because of her strong view, she includes as much physical activity into her classroom as possible.

Teacher training in the area of physical activity and movement breaks.

When the topic of training came up in the interviews, there were mixed opinions among the teachers on whether there was a necessity for training on movement breaks. One teacher stated that she would like more training on movement breaks but has done a lot of her own research online about these breaks and confirmed that a lot of it can be ‘*self-taught*’.

An interesting finding in this study was that only three out of eight teachers interviewed had received any training in the area of physical activity and movement breaks, but all teachers interviewed incorporated them into their day regardless of having received training or not. The Department of Education recommend increased physical activity throughout the day, but they have not provided a specific structure or set of guidelines for implementation of this recommendation (Department of Education and Skills, 2016). Three teachers in this study expressed the opinion that there needs to be training available for teachers. When Teacher 4 was asked about her opinion on the need for training in this area her response was:

I think it might be difficult to find the time to provide training, but it would be very useful if schools were provided with resource packs with ideas and ways to use and incorporate movement breaks into the school day every day in a consistent and meaningful way

Some of the teachers who were asked the same held a similar viewpoint and stated that there should be more awareness about movement breaks and ideas on how to implement them and the different types of breaks for the different needs. Teacher 5 said that ‘*there should be more awareness about the different resources and websites available for*

teachers and different ideas in how to use breaks, so they don't get repetitive for the children'.

Braniff (2011) argues that teachers ought to have more training on movement breaks in order to implement them effectively. Braniff (2011) further states that teachers must know the different strategies in order to cater for all the needs of the children in the class and it can be concluded that in order for this to happen, sufficient training must be provided.

Teachers' confidence with incorporating and implementing movement breaks in the classroom.

Teacher's confidence in using physical activity is a major influence in whether a teacher uses movement breaks throughout the day. One teacher expressed her concern; *'Sometimes after a break they would be quite giddy and I would try to get them back, it sometimes takes them a while for them to calm down'*. Similarly, the teachers in the McMullen, Kulinna & Cothran (2014) study voiced the same fear when considering including physical activity throughout the day.

When Teacher 4 was asked about what movement breaks look like in her class, she replied; *'They would be filled with noise! Very noisy!'* Often teachers may dislike movement breaks as they feel the class may become out of control with the noise level and the children out of their seats (McMullen, Kulinna & Cothran, 2014). It is important for teachers to try and find the balance and be able to control the children before, during and after the movement activity. Teacher 1 interestingly brought up that *'rules need to be set'* for movement breaks in order to eliminate any messing that may happen. Having

consistent rules for movement breaks would make the breaks easier to manage and the teacher would feel in control of the class at all times. Teacher 7 interestingly explained the rules she has set in her classroom: *‘each child must stand in their space bubble, no child is allowed to stand right in front of the board, everyone should have fun, and there’s no messing during breaks and if any child messes then they must sit down and complete the exercise from their chair’*. She explained that by having these rules in place allows her to run movement breaks smoothly in the classroom and the children know what is expected during these breaks.

2. Student outcomes of using movement breaks in the classroom

The literature explains that there are many benefits to physical activity and incorporating movement breaks into the classroom (Reilly, Buskist & Gross, 2012). All of the teachers in this study highlighted the enjoyment and high engagement their students had when participating in movement breaks. Three clear benefits were clearly highlighted from the interviews; better concentration, improved behaviour and improved.

Children find it easier to concentrate after a movement break.

The majority of the teachers interviewed all mentioned that improved concentration levels were one of the major benefits of using movement breaks. One of the teachers interviewed believed that *‘doing simple exercises increases the oxygen in the blood and aids concentration’*. Movement breaks are incorporated by teachers into the school day in order to improve children’s concentration and alertness (Cosgrave et al., 2014). Teacher 4 argued that *‘children can lose concentration quite easily throughout the day and movement breaks can be used as a transition between lessons or when you notice*

the class's concentration levels dipping'. According to the results in Ahamed et al., (2007) study, physical activity had positive influences on concentration and memory retention. Children are able to concentrate for longer periods of time after participating in movement breaks. This is especially important for when teachers are introducing new topics or concepts to the children. Teacher 6 stated that *'I give the children a longer activity break before starting a new topic in order for the children to be fresh and ready to concentrate'*. From the interviews, it was gathered that all of the teachers were confident in recognising when the children needed a break from their written or reading work and could see the benefits of the break in the activity after in terms of concentration and attention.

Teacher 1 believes that *'concentration can begin to lag after 30 minutes of sitting and listening'*. Teacher 5 then raised the point that she herself often finds it difficult to sit and listen in staff meetings after 30 minutes and questioned *'how are the children going to listen to you for 6 hours of the day without giving them breaks in between?'*. Fiore (2014) claims that movement breaks are essential for better concentration as the breaks allow children to release their excess energy appropriately which results in the children being more engaged during lessons. The improved concentration levels among students result in them being better able to listen and retain the information. This benefit of better concentration raised by the teachers in the research study is consistent with the findings from the literature review.

Improved behaviour after movement breaks.

The majority of the teachers interviewed commented on the better behaviour among the children after part taking in a movement break. Teacher 8 gave a clear example

of when her class were better behaved after movement breaks; *'I would make sure the children had at least 10 minutes of a break before assembly to ensure they were fresh and able to listen to the principal'*. This teacher expressed her concern that if the children didn't get this break before morning assembly, the children would begin to fidget, mess and eventually it would result in bad behaviour. Similarly, Teacher 3 said that she found the children to be *'less fidgety and disruptive during lessons after participating in movement breaks'*. Likewise, Teacher 5 stated that *'70. % of the time after movement breaks the children would be a lot calmer and more focused'*.

Linking this finding back to the literature, Mahar et al. (2006) concluded in their study that giving students a ten-minute activity break throughout the day increased their on-task behaviour by an average of 8%. The majority of teachers interviewed stated that their movement breaks would last between five to ten minutes. A few of the teachers mentioned that the time given to the breaks often depends on the children's mood and behaviour. Dillon et al., (2013) further argued that the more time given to physical activity breaks the more benefits teachers will see.

Movement breaks help to improve focus among the children.

Children are more focused and willing to complete their work after participating in movement breaks. It was expressed by Teacher 3 that the quantity and quality of work was superior after breaks and she notices a huge difference in the standard of work if the children do not engage in physical activity throughout the day; *'the quantity and quality of work would be better in terms of just having sums thrown down on the page, their work is ruled, dated and has a title'*.

Physical activity allows the children to refocus their attention (Ratey, 2008). Teacher 6 agrees with Ratey expressing the view *'I think it is very important that children have a chance to expand their energy and physical activity can provide children with a chance to re-centre and calm themselves before and while completing work'*.

The link between movement breaks and academic performance.

Much of the relevant literature suggests that there is a strong link between academic performance and movement breaks (Howie & Pate, 2012; Donnelly & Lambourne, 2011). Some research argues that children perform better in tests and class work after engaging in physical activity. Teacher 4 personally thinks that *'there is a huge improvement in academic performance after the children take part in movement breaks'*. However, when Teacher 6 was interviewed and asked about his opinion on the link between movement breaks and learning, his response was that these breaks do not necessarily link to better learning *'but there is more quantity of work produced, and the students are more able to learn'*. Interestingly, this teacher's view on academic performance and movement breaks opposes what some of the literature has produced. His views are in agreement with Everhart et al., (2010) study, stating that there is no strong correlation between movement breaks and academic performance.

3. Movement breaks and children with SEN

The majority of the teachers in this study believed that movement breaks are especially important to children with SEN as *'they provide children with a sensory and a physical release'*. Teacher 2 stated that *'sensory breaks are particularly important as they are breaks that incorporate balance, co-ordination and endurance'*. Another teacher explained that he has a boy with ADHD in his class and *'he requires movement breaks*

to help him concentrate on his work and complete it'. Similarly, Sousa (2016) argues that it is essential for teachers to provide movement breaks for children with SEN in order for them to release stress.

Interestingly, teacher 5 mentioned that she *'would love if there was greater guidance on what movement breaks would be most suitable for the different needs that present in primary school'*. This teacher explained how she has done a lot of independent research into movement breaks for SEN children and she discovered a sensory diet. A sensory diet helps children to get into the right zone so they can pay attention and learn (Biel & Peske, 2018). It can help children who are overactive to feel calmer, and underactive children to feel more alert. Teacher 5 described how she created two sensory diets for two children in her class who have ASD and stated that *'the difference these sensory diets make to the lives of those children in terms of regulating themselves and coping throughout the school day is monumental'*. Some of the movements this teacher used in these sensory diets were stomping feet on the ground to let the child feel the vibrations up their legs, walking on cushions to increase their balance, pushing or pulling a heavy box, or carrying heavy books to another classroom.

Reduced anxiety among students with SEN after participating in movement breaks.

Some of the teachers expressed the idea that providing movement breaks especially helps children who suffer from anxiety. Teacher 6 explained that *'after movement breaks children with SEN aren't as anxious as their anxiety has been released, and they're better able to regulate their emotions which is brilliant'*. This teacher further clarified that the emotional outburst these children can often have, have reduced

significantly from the start of the year. Teacher 2 explained that *'I used movement breaks after each section of a standardised test in order for children to relieve their anxiety and help them to relax'*. Teacher 5 noticed that the children in her class who suffer from anxiety are much calmer throughout the day when there has been lots of movement breaks given.

Braniff's study (2010) examined how movement breaks affected student's anxiety. This study investigated how one teacher used movement breaks when he recognised that the students were nervous or worried. He stated that the breaks were beneficial to these students and saw a reduction in anxiety among the students after physical activity.

4. The challenges of incorporating movement breaks into the day

Given that class management is a primary concern for teachers at all experience levels, it is no surprise that teachers are concerned about the effect of movement breaks on class control and class management (McMullen, Kulinna & Cothran, 2014). The teachers in this study specifically identified three challenges: time restriction, space constraints within the classroom and the challenge of returning to on-task behaviour after the activity.

Curriculum overloads and time.

All of the teachers in the study felt the pressure of time constraints and the difficulty of including all curriculum subjects as well as trying to implement movement breaks. Teacher 4 stated that *'Finding enough time while meeting the demands of the curriculum'* was one of the main challenges of incorporating movement breaks into her classroom. Similarly Teacher 2 said that *'there isn't enough time in the day to get*

everything done'. McMinn, Rowe and Trim (2011) argue that teachers do not carry out movement breaks due to lack of time. The curriculum is already overloaded, and teachers find it difficult to complete all of the subjects let alone include movement breaks throughout the day.

It is important for teachers to promote learning through physical activity (Centre for Disease Control and Prevention, 2010). One solution to this challenge which a few of the teachers mentioned was to link academic subjects with movement breaks in order to try and include all areas of the curriculum. Teacher 5 stated that *'a lot of the time my activity breaks are integrated, the children think they are randomly singing a song and dancing between lessons, but it is all done on purpose'*. This was similar to Teacher 2's response

'at the start of each maths lesson I spend 10 minutes with the children out of the chair practicing their counting and skip counting. We run on the spot, lunge, squat, touch the sky and the ground, and count at the same time. This is one way I am able to get the children active and they love it!'

Space and health and safety issues.

Space and safety issues were highlighted by the teachers as one of the main challenges that they face when incorporating movement breaks in the classroom. On average the teachers interviewed have between 26 to 30 children in their classroom, which would prove difficult to manage if all children are out of their seats moving around at one time. One teacher expressed that *'a child in my class has tripped over a school bag during a guided dance break!'*. A few of the teachers mentioned that for longer movement breaks they push back the chairs and tables in order to create space in the middle of the

children to move it. Often this wouldn't be suitable for including a 2/3-minute break. Another teacher explained that she tells the children '*to imagine they are in a space bubble and that is their space to move in*'. She described this as one of her strategies to keep the children in their own spaces in order to eliminate any child falling over. Some of the teachers mentioned some of their solutions to overcoming the issue of limited space in their classroom: these included exercises tailored to the space, chair exercises, moving on the spot and going outside if it is dry. Similarly, McMullen, Kulinna and Cothran's (2014) study looked at teachers' views on activity breaks and even though they had positive responses to the incorporation of the breaks, space constraints was one of the recurring themes that emerged from their interviews.

Fear of the children not settling into the next lesson.

Often the children get really excited at the thought of being allowed out of their seats and sometimes they see it as an opportunity to fool around or misbehave. Teacher 2 stated that '*I fear the children will not settle back down to work after a movement break*'. This fear was felt by another one of the teachers who expressed her concern about being able to control the class after a movement break. McMullen, Kulinna and Cothran (2014) established that the teachers in their study preferred activity breaks that were easy to manage and control. A teacher in this study argued that it was often very difficult to get the students back on task after a movement break. It is then important for teachers to establish clear rules for movement breaks in order to implement them with ease and for the children to return on task after the break without any difficulties (McMullen, Kulinna and Cothran, 2014).

Conclusion

This Chapter discussed the findings that emerged from the interviews conducted with the teachers. Several interesting themes appeared which correspond with the current research that has been carried out on this topic. The following Chapter will consider the findings and make recommendations in relation to the research question.

Chapter 5- Conclusion and recommendations

Introduction

This final Chapter concludes this study with a summary of the findings and makes a number of recommendations inspired by the original aim and objectives as well as suggestions for further research. This study answers the research question of Teacher's views on the correlation between movement breaks and student learning, concentration and classroom behaviour.

Summary of Findings

The primary aim of this research study was to investigate teachers' perspectives on the impact movement breaks had on student's learning, concentration and behaviour. The research findings provided many interesting insights in relation to the use of movement breaks in the primary school classroom and the effect these breaks had on student learning, concentration and behaviour.

There are four main findings from the research. Significant benefits of concentration and behaviour was one of the key findings in this study. The teachers interviewed expressed how the children's concentration levels and readiness to learn was improved after participating in a movement break. In terms of classroom behaviour the children were able to release built up energy in an appropriate way which resulted in them being less fidgety and disruptive during lessons. Secondly, this study shows that there are many positive outcomes of using movement breaks for children with SEN. These children are often very anxious and the movement breaks allow them to destress and become more relaxed. From this study, it is realised that there are often particular

movement breaks used for children with SEN. For example sensory breaks, heavy lifting, and pushing and pulling exercises. Thirdly, there are a number of challenges facing teachers when implementing movement breaks in the classroom, for example space, knowledge, time and lack of resources. Finally, the teachers highlighted the the lack of awareness of the benefits of movement breaks among their colleagues and the lack of guidance from the Department on how to use these breaks.

Recommendations for practice and future research

The researcher feels that a number of recommendations arise in terms of practice and further research. Four recommendations are proposed:

The first recommendation is to increase the awareness about the benefits of movement breaks among primary schools and teachers. Resource packs should be available to teachers to guide them in how to use movement breaks, when to use them and various websites and exercises developed for teachers to use. By providing more information and awareness about movement breaks, teachers will hopefully begin to incorporate them more into their classrooms and in time these breaks may be a part of the daily routine for the children.

Secondly, it is recommended that there more information be provided to teachers about children with SEN and the specific movement breaks that would benefit them. This will give teachers a greater understanding and more specific knowledge which will allow them to cater for all needs that may be present in their classroom.

The third recommendation is the need for schools to carry out strategic planning when designing classroom layout. Making the best use of general space will allow for teachers to plan and implement movement breaks in a safe environment. Teachers can use empty corridors for the children to do some exercises and movement. It is also important for teachers to strategically plan their days in order to incorporate the time for movement breaks. This detailed planning will ensure the curriculum demands are being met while also having timed movement breaks to allow the children to destress and release energy.

Finally, this study focused only on teachers' views on the use of movement breaks in the primary school classroom, on childrens' learning, concentration and behaviour. Further research conducting measured tests to evaluate student's performance and behaviour is recommended.

It is important to note that the results of this study cannot be generalised as it was conducted on a small scale. However, the author considers that it does offer some compelling arguments about how movement breaks can have a positive impact on the children's learning and concentration.

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Appendix 1: Letter to principal of local primary school seeking permission to conduct research



2019

Dear Principal,

My name is Ciara MacNamara and I am a final year PME student in Marino Institute of Education. As part of my course, I am required to carry out a piece of research. The area in which I am carrying out my research on is physical activity and student learning, concentration and behaviour. This dissertation will investigate the views and experiences of teachers in primary schools regarding the correlation between physical activity and classroom behaviour and concentration. This research topic has been approved by the Marino Ethics in Research Committee.

The data collection for this project involves individual interviews. The interview will take approximately 30 minutes and will be held on school premises.

The interview will be recorded on a recording device and once a transcript of the recording is made the recording will be destroyed in line with the MIE Guidelines. The data collected from the interview will be treated with utmost privacy and confidentiality. The information will be stored safely on a password protected device and access will only be available to myself, my supervisor and external examiner if required. The findings from the interview will be included in the dissertation and will be viewed by myself, my supervisor and the external examiner.

Please note that the teachers are under no obligation to partake in this research study. If at any time a participant wishes to withdraw from the study, they may do so at any time, without feeling under pressure to provide a reason for doing so.

If you have any questions regarding the study or require more information, please don't hesitate to contact me. I can be contacted by email at cmacnamarapme17@momail.mie.ie or my supervisor Mairead Nally (maireadnally@yahoo.com).

Thank you for taking the time to read this,

Kind regards,
Ciara MacNamara

Appendix 2: Letter to the teachers requesting them to take part in the research



2019

Dear Teacher,

My name is Ciara MacNamara and I am a final year PME student in Marino Institute of Education. As part of my course, I am required to carry out a piece of research.

Title of project: Teachers' views on the correlation between physical activity and Student learning, concentration and classroom behaviour.

The Study: This research project will investigate the views and experiences of teachers on physical activity in the classroom and how it may affect children's behaviour and concentration.

Participant information: My method of data collection is in the form of a semi structured interview. If you agree to participate in this study, you will be asked to part take in a one to one interview with myself that will last approximately 30 minutes.

The interview will be recorded on a recording device and once a transcript of the recording is made the recording will be destroyed in line with the MIE Guidelines. The data collected will be treated with utmost privacy and confidentiality. The information will be stored safely on a password protected device and access will only be available to myself, my supervisor and external examiner if required. The findings from the interview will be included in the dissertation and will be viewed by myself, my supervisor and the external examiner.

You are under no pressure to partake in this research study, but your participation would be greatly valued and appreciated. If you agree to participate in this research and then decide that you no longer wish to do so, you can withdraw at any time up to the point of data analysis.

If you have any questions regarding the study or require more information, please don't hesitate to contact me. I can be contacted by email at cmacnamarapme17@momail.mie.ie or my supervisor Mairead Nally (maireadnally@yahoo.com).

Thank you for taking the time to read this,

Kind regards,

Ciara MacNamara

I agree to take part in this interview

Signed:

Date: