An investigation into the correlation between children's participation in extra-curricular activities and the characteristics of their class teacher

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Abstract
The main aim of this investigation was to establish whether a correlation exists between a chi level of participation in extra-curricular activities and the characteristics of their class teacher. study was conducted using one hundred and sixty-five primary 7 children and eight teachers f primary schools across Northern Ireland. The children are aged 130.6 (± 3.0) months which is equivalent to 10.9 years; the teachers are aged 40.4 (± 9.6). Questionnaires were issued to the children in order to gather information as to the amount, type and duration of the extra-curricular activities completed each week. Furthermore a set of questionnaires were completed by each class teacher which detailed their characteristics such as their experience, gender, subject specialism, personal activity choices and extra-curricular activities which they led. All results were then analysed using Microsoft excel in order to draw conclusions as to whether any correlation occurred. The study revealed mixed results, concluding that several teacher characteristics indicated a correlation with participation in active extra-curricular activities while other teacher characteristics displayed no evidence of any correlation with extra-curricular activities

Background to the study

Children's participation in regular physical activity is a topic which consistently generates much debate. Currently much research has been conducted to demonstrate the importance of children participating in daily physical activity and to highlight the many health benefits of exercise. This investigation takes a slightly different angle in focusing on exercise within extra-curricular activities in primary school; specifically how a child's participation in extra-curricular activity can be influenced by the characteristics of their teacher. It is well documented that characteristics of a teacher can have a huge impact on a child's learning (Olaleye, 2011). It is claimed by Adeyemo (2005) that "teacher characteristics influence teaching and learning in classrooms." This viewpoint is reiterated by Ali (2009) stating there was a "statistically significant relationship between teacher characteristics and student academic achievement." Some studies have revealed that a teacher's attitude can directly influence that of their pupils; thus this study further aims to investigate whether a teacher with a positive attitude towards exercise will affect their children's participation in active extra-curricular activity (Wirth & Perkins, 2013). In terms of defining teacher characteristics they can be broken into two categories: personal characteristics incorporate age and gender whereas experimental characteristics include qualifications and prior experience (Ashton, 1996). Although teachers directly shape a child's development, a wide range of other factors are crucial such as family life, community, diet and school environment (Rockoff, 2004). Therefore this study aims to evaluate the extent to which teacher characteristics play a role in extra-curricular participation.

Need for Study

Globally much research has been conducted to examine the impact of a teacher's characteristics on a child's development (Rice, 2010; Clofelter et al, 2007; Goe, 2008). However research into the implications of a teacher's characteristics on a child's learning is limited within Northern Ireland. Moreover this investigation focuses solely on a teacher's impact on a child's level of extra-curricular

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activity; a unique investigation in Northern Ireland primary schools. The findings of this study may indicate a particular pattern or trend which could prove useful in trying to increase children's participation in extra-curricular and physical activity generally.

Aims and Objectives

The research aims to establish whether a correlation exists between a child's level of participation in extra-curricular activities and the characteristics of their teacher. The information on the child's characteristics will be gathered in the primary school through use of a questionnaire for each child. Similarly the information on teacher's characteristics will be obtained through use of a questionnaire for each teacher. The data will be transferred into excel in order to establish whether or not a link exists between child participation and teacher characteristics. All results will then be analysed in order to reach a conclusion and ultimately determine whether there is a substantial link between a teacher's characteristics and their children's participation in extra-curricular activity.

Review of Literature

Physical activity in extra-curricular activities

Extra-curricular activities are those which "are organised and supported by schools and primarily occur on school grounds." These activities are extremely beneficial to the children, encouraging them to "socialise with peers and adults, set and achieve goals, compete fairly, recover from defeat and resolve disputes peaceably" (Danish & Gullotta, 2000). A vast amount of children participate in these activities as highlighted by Mahoney et al (2002) in claiming that 75% of children "participate in structured extra-curricular activities." Due to this huge participation in extra-curricular activities, they have been of great interest to many educationalists and thus have been the subject of much research over the years.

One must first examine any potential positive impact that extra-curricular activities afford children. Feldman (2005) would affirm that extra-curricular activities are "central developmental settings for adolescents." In addition, Feldman (2005) claims "structured activity participation has been linked to many positive academic, behavioural and psychological outcomes." This clearly outlines the importance of extra-curricular activities and their many benefits to children. Darling (2005) supports this point of view, conveying that these positive attributes acquired in extra-curricular activities will be of great benefit to pupils and will remain with them for a lifetime. One must consider that many children will not be exposed to similar beneficial activities outside of school; thus their participation in extra-curricular activity is vital.

In terms of social development, it is claimed by Darling (2005) that extra-curricular activities "have traditionally been offered by schools as a way to offer developmental and leadership opportunities for youth, and to build school spirit." Hence the role of extra-curricular activities can be viewed as mutually beneficial for both the school and pupil. Additionally, Darling (2005) stated that children are granted the opportunity to "associate with peers different from those they encounter at home and in the classroom." This ensures that the benefits of extra-curricular activities are multifaceted. Youniss et al (2002) depicts that through encountering these peers, children will form their identity by "developing skills, discovering preferences and associating themselves with others." Furthermore, findings have indicated that children are given the opportunity in extra-curricular activities to form connections with peers through "mutual trust and commitment" (Dworkin et al, 2003). Eccles at al (2002) would take this viewpoint further in commenting that extra-curricular activities also present children with an invaluable opportunity to "form strong bonds" with teachers and provide a platform for children to "maintain contact with the school environment"; thus highlighting the vast importance of these activities as they have the potential to enhance a child's commitment to their school life. Mahoney (2001) presents an interesting viewpoint which further stresses the positive social impact of extra-curricular activities in claiming that through participation, positive youth

development is promoted and children are protected "from risks associated with unsupervised free time."

Psychologically, children have the opportunity to learn emotional competencies in participating in a wide range of extra-curricular activities (Metsäpelto & Pulkkinen, 2014). Exploring the joys of winning and more importantly experiencing the difficulties in recovering from a defeat are crucial in a child's emotional development. Through a range of contexts, extra-curricular activities will afford the children an opportunity to fully explore these emotions.

In analysing advantages of extra-curricular activities, one must also consider their impact towards academic development. According to Darling (2005) studies have shown a positive correlation between children who participate in extra-curricular activities and better academic performance. Furthermore, these activities are of benefit to students of all academic abilities as stated by Darling (2005) that "extra-curricular activities are seen as a way of offering academically gifted students a way of excelling within the school environment, and a way for academically challenged students to achieve within the school setting." The term co-curricular further acknowledges the positive effect of extra-curricular activities in schools with Kezar & Moriarty (2000) suggesting that these range of activities can be classified as "highly structured" activities which "complement student learning" that takes place in the classroom.

Many extra-curricular activities offered in primary schools are active and therefore involve some form of physical activity. In recent times it has been well documented that children are becoming much less physically active. Boredom & Riddoch (2001) support this statement, asserting that children are much less active than "their counterparts fifty years ago." Roberts & Foehr (2004) further support this claim as they explain that the average child spends a startling five to six hours daily watching the television, playing video games or using the computer. This lack of regular physical activity is cause for major concern among children in our primary schools as it has led to a dramatic increase in obesity. Obesity is becoming a huge problem, tripling in the last thirty years (Centre for Chronic disease prevention and Health Promotion, 2010). Many studies have concluded that regular sports exercise through mediums such as extra-curricular activities reduces the risk of obesity and improves overall mental and physical wellbeing (The World Health Organisation, 2011).

One must also consider any potential disadvantages of extra-curricular activities. Darling (2005) would state that some educationalists are of the view that activities which do not contribute directly to the "core academic curriculum" are a hindrance to teachers as they experience evermore time constraints within the statutory curriculum. Additionally this may have a negative impact on the students, potentially distracting them from their academic study. Although much research has been conducted which conveys a relationship between extra-curricular participation and positive academic achievement, Brown et al (2000) would argue that the correlation is "consistent, but small." Hence, this has prompted Deasy (2003) to question the huge emphasis on extra-curricular activities and their importance in suggesting that the "relationship between extracurricular activities make up only a small part of the broader context of leisure that contributes to adolescent development." This viewpoint clearly undermines the significance and importance of extra-curricular activities for children. Darling (2005) endorses this viewpoint in claiming that the potential benefits of extra-curricular activities may be dependent solely upon a child's characteristics, the setting and the activity.

Teacher Characteristics

There has been a lack of research into whether a teacher's characteristics influence the level of participation in extra-curricular activities. However there has been an ongoing discussion regarding the impact of teacher characteristics upon student learning and academic progress generally.

Schempp & Graber (2002) convey how the role of a teacher is crucial in influencing children as they claim that whoever "teaches our children and what they believe are important questions for any society to address." I intend to first explore this ongoing discussion with respect to differing characteristics including gender, experience and subject specialism.

One must firstly examine current research examining the impact of the teacher's gender on teaching quality. Educationalists have long been researching the contribution a teacher's gender makes to student achievement. Hoffman et al (2009) state that "students may respond differently depending on the gender of a teacher." One can therefore presume that a teacher's gender is a vital factor in the quality of learning that takes place for children. Darling (2005) supports this view, further commenting that this may stem from a child's relationship with their parents in stating "girls and boys respond differently to mothers and fathers"; thus depicting the potential influence of parenthood on a child's perception of male and female teachers. Hoffman et al (2009) would assert that children perform better when being taught by a same gender teacher in claiming that "grade performance is up to 5% of a standard deviation better for students with a same-sex instructor." This evidence is further supported by Dee (2005) who investigated the impact of a teacher's gender on primary school results. In presenting this evidence he concluded that assignment to a same-gender teacher will significantly improve both boy's and girl's achievement. Additionally, Hoffman et al (2009) would explain this finding through suggesting that students may view teachers of the same sex as role models if they "exhibit greater intellectual engagement, conduct and interest." However, one must also consider that some researchers have questioned the effectiveness of these surveys. Kane et al (2011) would claim that the primary stumbling block "has been a lack of consensus on valid measures for recognising and rewarding effective teaching." It is further commented that measuring effective teaching is made even more difficult given the possibility that "some teachers are assigned better students who would have achieved highly in many different classrooms" (Kane et al,2011). This would considerably undermine the above research due to the possibility of unreliable evidence.

One must also consider any potential correlation between teaching experience and effective teaching. Rice (2010) suggests that throughout the teaching community "the underlying assumption is that experience promotes effectiveness." This immediately implies that the greater experience a teacher has, the greater the quality of their teaching and therefore the greater the learning that will take place. This research indicates that beginning teachers are less effective than those who have several years of experience. Clotfelter (2006) would agree with this statement and support it statistically in claiming "the benefit from having a highly experienced teacher is approximately one-tenth of a standard deviation on reading and math test scores." However there has been much evidence to suggest that experience matters only during the first five years of teaching (Clofelter et al, 2007; Goe, 2008). These findings depict that experience is only relevant for a short time as after the first few years of teaching "marginal returns diminish" (Clotfelter et al, 2007). This viewpoint is further explained by Goe (2008) in asserting that after the first five years of teaching "the contribution of experience to student learning appears to level off." Additionally, Ladd (2008) would provide evidence to support a plateau in gaining experience in claiming that "teachers with more than twenty years of experience are more effective than teachers with no experience, but are not much more effective than those with 5 years of experience." In delving deeper into the subject, Ladd (2008) presents evidence to suggest that teachers who have greater than twenty-five years of experience "may be less effective than their less experienced colleagues." Thus conveying that with increased experience, teaching quality will not only plateau but may deteriorate at a certain point. Rice (2010) would assert an alternative viewpoint questioning any study which indicates experience effects teaching quality in claiming that most studies "do not detect meaningful differences between more and less experienced teachers." This evidence further emphasises the complex and contrasting debate between experience and effective teaching. Hence contradicting the suggestion that

experienced teachers are superior practitioners.

Finally, I will assess the extent to which the subject specialism of the teacher affects quality of teaching. Current literature would reveal varying evidence to suggest that a teacher's subject background influences their teaching. Goe (2008) supports this claim of "mixed" research; however suggests that generally "teachers' knowledge of their subject matter, as measured by degrees, courses and certification in that area, is associated with high performance." Therefore one could argue that a subject specialism positively impacts overall teaching quality. Betts et al (2003) would support this claim in stating "teachers' subject-area certification or authorisation is one of the teacher qualifications most consistently and strongly associated with improved student achievement." Intriguingly this improved student achievement is of particular significance when children are positively influenced by their teachers who possess subject specialism in literature, mathematics and science (Goe, 2008; Carr, 2006). Through a more in depth analysis it becomes clear that a stronger correlation exists between the achievements of secondary pupils than primary pupils with regard to their teachers "subject area expertise"; thus suggesting that the teacher's subject specialism is more relevant and beneficial to learning as a student matures (Goe, 2008). This finding is further explained by Goe (2008) in claiming "the teaching of higher-level courses seems to require greater knowledge of subject matter than does the teaching of lower-level courses." This can be viewed as a direct result of more complex material being taught in higher level education. On the contrary, some educationalists have presented research which suggests that teachers with a subject specialism at Masters level may negatively impact student achievement (Clotfelter et al, 2006). To an extent, Hanushek et al (2005) is in agreement with this viewpoint having found no link between teachers who have a Masters in mathematics and their pupils' mathematics test scores.

Physical activity in extra-curricular activities and teacher characteristics

Due to limited research exploring any potential link between teacher characteristics and participation in extra-curricular activities, one would suggest that current research into the impact of teacher characteristics upon a PE lesson should be considered in this investigation. According to a report by the HM inspectorate of education in Scotland (2001), "primary PE is best taught by specialists"; hence suggesting that a teacher with a PE specialism will teach a more effective lesson. This view is supported by Starc & Strel (2012) in asserting "specialist PE teachers were more successful than generalist teachers." He reveals a study of Slovenian teachers in an attempt to compare the effectiveness of generalist teachers with PE specialists. It was noted that generalist teachers receive between 175-335 hours of PE teaching within their five year study period in contrast to the 1600 hours that the PE specialists received. It was commented that children taught by PE specialists enjoyed a greater improvement in physical fitness along with improved motor skills. Crucially, Starc & Strel (2012) further affirmed the suggestion that PE specialists are superior in claiming "PE teachers seem to be more effective than generalist teachers in delivering of PE lessons, even if the learning environment, facilities and available equipment are very similar, if the curriculum is identical, and even with a similar number of children per teacher at PE lessons." As a result of higher quality lessons from PE specialists, Youth Sport Trust (2010) suggest that every primary school should have a "primary Physical Education specialist." In reality though, this is not always practical and many schools are finding alternative solutions including employing external sports specialists. Ward (2005) would support this viewpoint in stating "a third of all primary schools are currently using external sports providers and coaches to cover PE lessons." The use of external sports specialists may also stem from the poor initial teacher training quality and volume in the United Kingdom as according Professor Margaret Talbot (2007), labelling it a "national disgrace." The 'International Council for Sport Sciences and Physical Education' (2001) would approve of this viewpoint in claiming that many Physical Education lessons are effectively "supervised play." It is further alluded to that this may be as a result of the lack of training primary teachers receive with regard to the teaching of PE.

Aaronson et al, (2003) puts forward an interesting viewpoint in claiming that students' positive achievement cannot always be "specifically attributed to the influence of teacher characteristics." Hence, one should remember that a wide range of other important variables need to be considered while measuring the influence of a teacher's characteristics upon an effective PE lesson and upon learning generally.

Methodology

Research Design

The primary objective of this study is to investigate any potential correlation between children's participation in extracurricular activities and the characteristics of their class teacher. Conducting research is an integral element of any study. Furthermore, choosing suitable research techniques and methods is essential in order to ensure accurate and reliable results are produced in the investigation. The study will utilise both quantitative and qualitative research in the form of questionnaires in order to assess a child's level of participation in extra-curricular activity and also determine their class teacher's characteristics. In terms of the children, a questionnaire will be used to record the amount, duration and type of extra-curricular activity they engage in both before and after school. The use of individual questionnaires will ensure that the information is accurate as the children will not be influenced by other parties. An alternative questionnaire will be completed by class teachers and used to gage their characteristics including their age, gender, subject specialism, personal activity choices and any extracurricular activities they led.

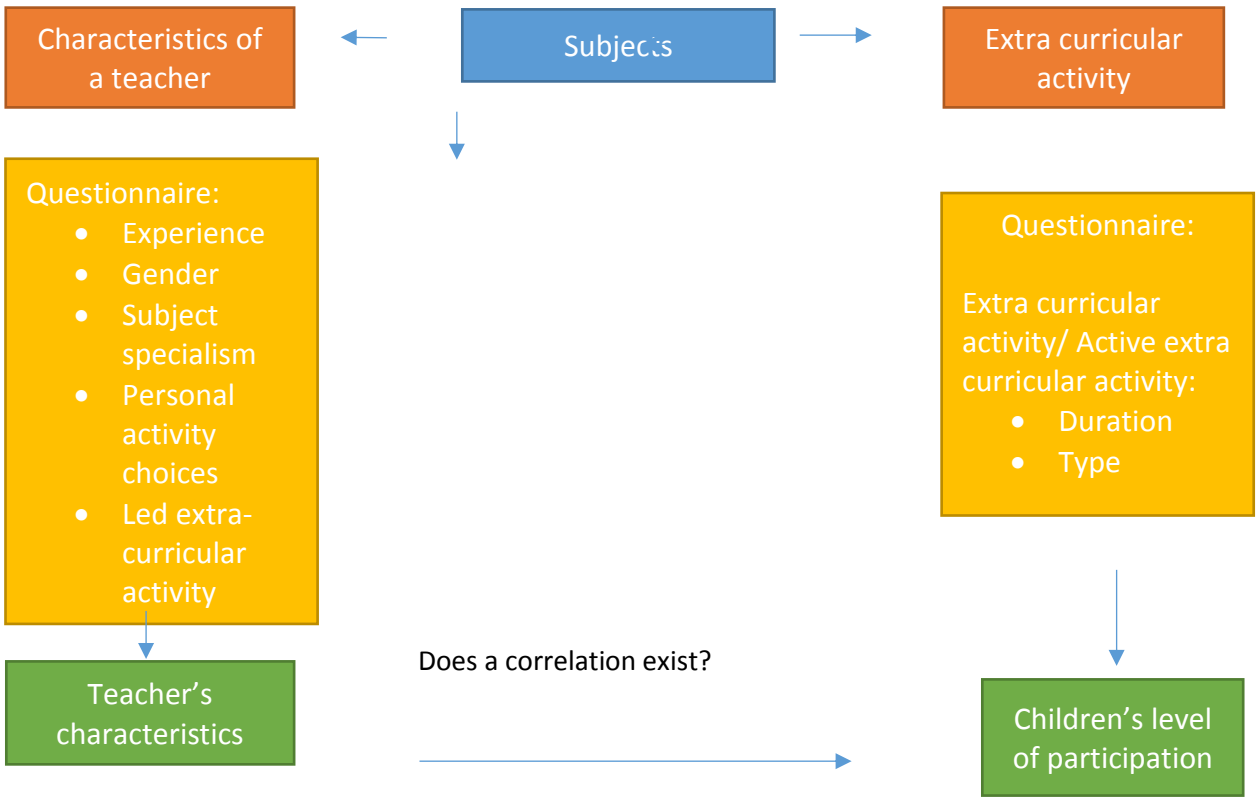

Figure 3.1. *A* graphical representation of the research design for the investigation. It highlights the process that the subjects will undertake.

Subjects

The subjects are pupils from six primary schools across Northern Ireland. In terms of location, five of the schools are situated rurally while one school is situated in an urban location. Each school provides a range of extra-curricular activities that are accessible to all pupils. The children are in

primary seven and aged 130.6 (± 3.0) months, which is equivalent to 10.9 years. The study includes eighty-three female subjects and eighty-two male subjects. The secondary subjects are eight teachers from six primary schools and are aged 40.4 (± 9.6). The male to female ratio is evenly split (n = 4 female; n = 4 male).

Procedures

It is vital to follow formal consent procedures prior to distributing questionnaires. It is firstly essential to gain permission from the school, their principal and the parents/guardians of the children who were participating in the investigation. A letter will be distributed to each of the school principals in order to gain full consent before proceeding with the study. This letter provides a broad overview of the investigation, detailing the main objectives of the study and nature of the research which will be carried out. It further informs the principal of any requirements of the school, class teachers and pupils. Importantly, the letter promises confidentiality in terms of any information gathered. The parents/guardians of children involved will also receive a letter which will explain the nature and intentions of the investigation and also explain their child's role in it). Similarly to the principal's letter, the parents/guardians will be informed of the strict anonymity of this investigation. The letter will have a consent form attached which must be signed and returned to the school in order for a child to be able to take part in the research. Once permission is granted by all parties the research process can commence.

Testing

Characteristics of a Teacher Questionnaire

Each primary seven teacher will be provided with a short questionnaire in order to gain an insight into their characteristics). Specifically this will include information regarding the teachers' age, experience, gender, subject specialism and activity choices. The resulting information will be added to a spreadsheet along with the children's questionnaires in order for both sets of data to be analysed and compared. It is hoped that as a result of informing the teachers of the anonymous nature of the questionnaire, they will answer as honestly as possible (Patton, 2002).

Children's Level of Extra Curricular Activity Questionnaire

The children will be provided with a questionnaire in order to gage their level of participation in extra-curricular activities.This will include gathering information regarding the duration, type and time (AM/PM) of each activity. All research gathered will be added to A spreadsheet for further examination and to compare with the research gathered about the class teachers' characteristics. The children will be encouraged to take their time and to answer each question truthfully.

Analysis

In order to accurately determine the extent to which any correlation occurred between the characteristics of a class teacher and participation levels in extra-curricular activity, results will be calculated using formulas in Microsoft Excel.

To conclude, the methods chosen to gather information and anaylse data have been considered the most appropriate in order to meet the objectives of this study.

Results and Discussion

Introduction

The results of the questionnaires are detailed and discussed in the following section. This study investigates the correlation between a child's participation in extra-curricular activities and the characteristics of their class teacher.

Subjects

The subjects are pupils from six primary schools in Northern Ireland. They are in primary seven and aged 130.6 (± 3.0) months which is equivalent to 10.9 years. The study involves 83 females and 82 males. The secondary subjects are eight teachers from six different schools, aged 40.4 (± 9.6). There is an even split of male and female teachers (n=4 female; n = 4 male).

Participation in extra-curricular activity

This section will detail research gathered on participation in extra-curricular activity. That will include statistics regarding participation in general extra-curricular activity and also active extra-curricular activity. Furthermore, a breakdown of participation into boys and girls will be included.

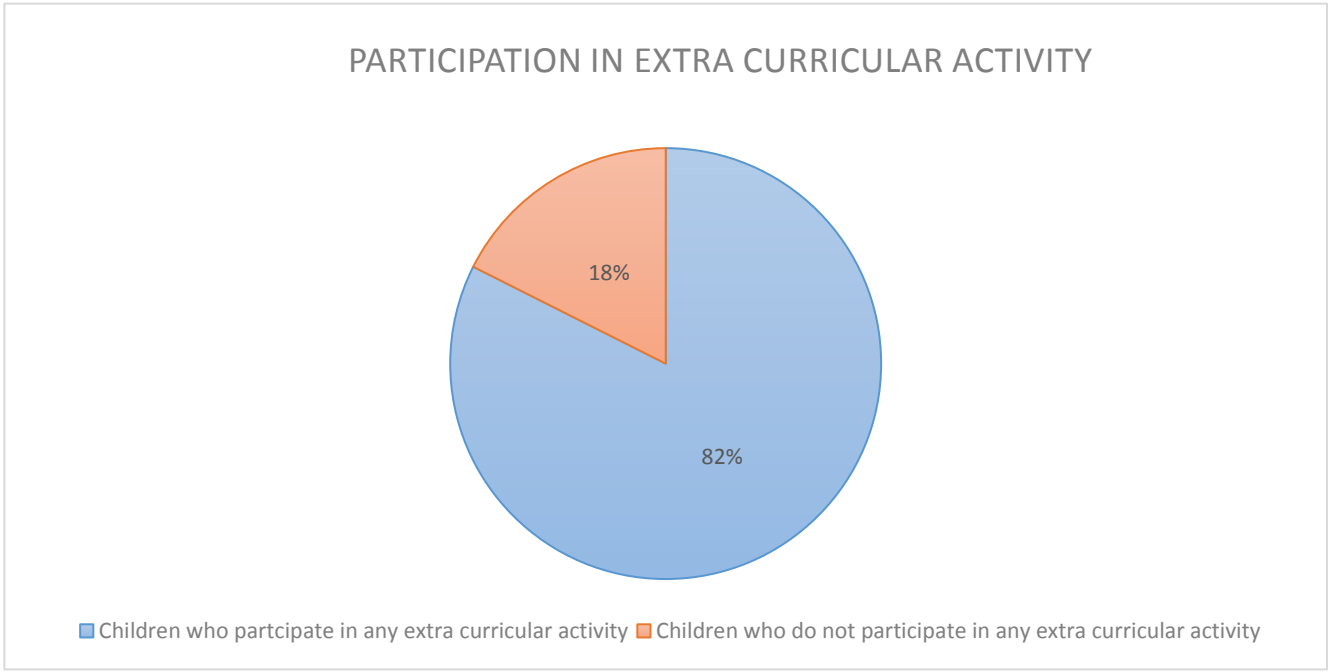

Figure 4.1. Represents the children's participation in extra-curricular activities.

Figure 4.1 represents the children's participation in extra-curricular activities. It highlights that out of all children surveyed (n=165) ; 82% (n=136) of children participate in extra- curricular activities while 18% (n=29) of children do not partake in any form of extra- curricular activity. This figure is slightly higher than the average of 75% of children who participate in any form of extra-curricular activity (Mahoney et al, 2002).

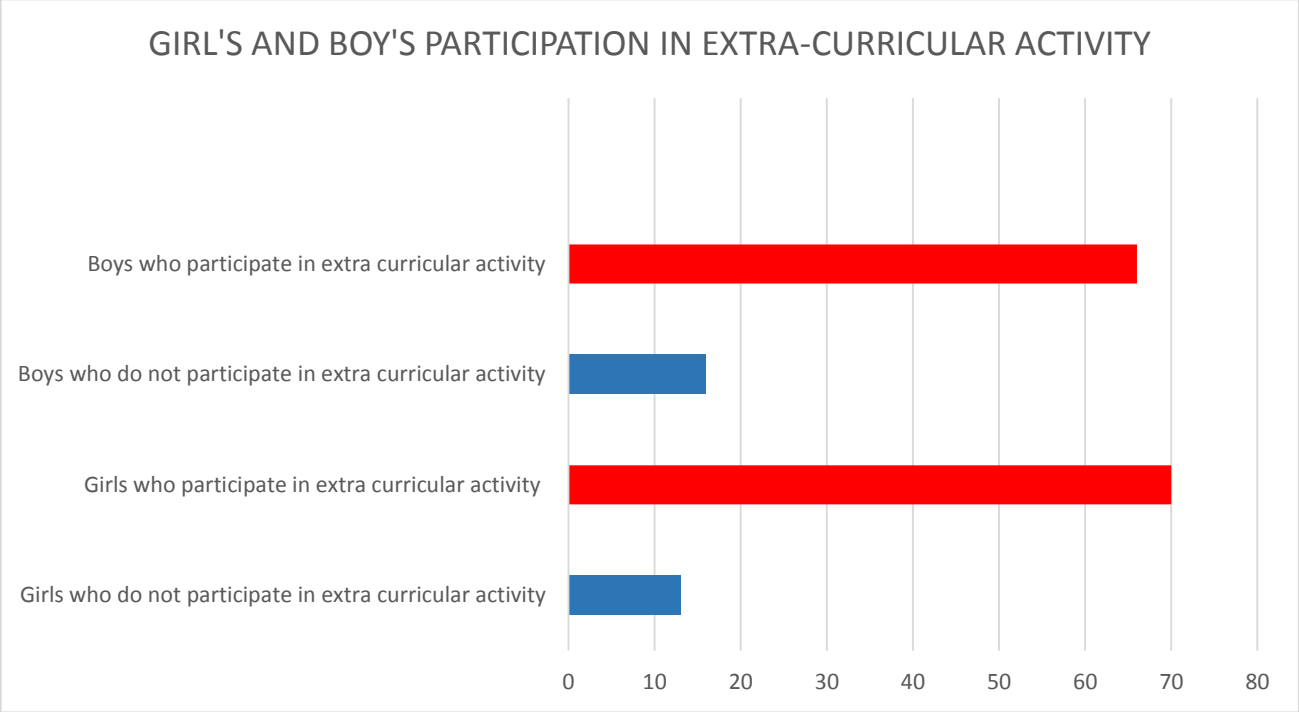

Figure 4.2. Represents the breakdown of boy's and girl's participation in extra-curricular activity.

Figure 4.2 provides a further insight into the data through a breakdown of participation in extra-curricular activity. The graph shows that slightly more girls participate in extra-curricular activity. Out of the children that participate in extra-curricular activities (n=136); 49 % (n=66) are boys and 51% (n=70) are girls. This evidence indicates that girls are more likely to experience the positive academic, behavioural and psychological outcomes which are linked to participation in extra-curricular activity (Feldman, 2005).

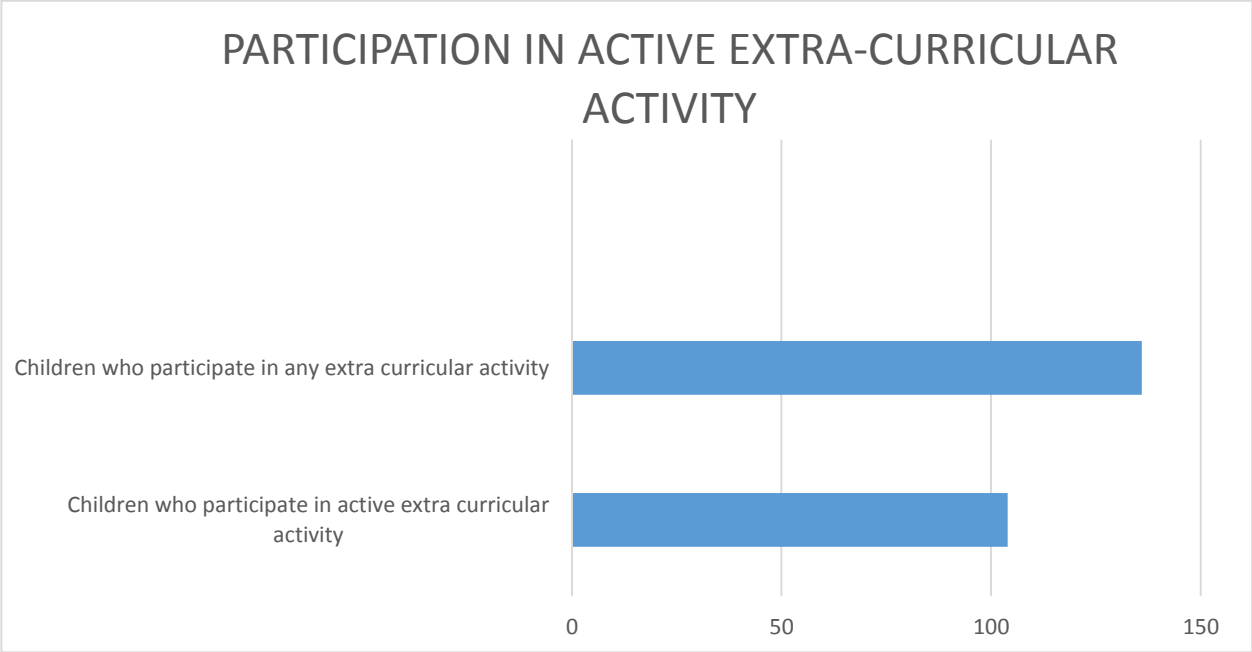

Figure 4.3. Represents the children's participation in active extra-curricular activity.

Figure 4.3 highlights the amount of children who participate in active extra-curricular activity. Through focusing only on the children who participate in extra-curricular activity, one can examine which children partake in active extra-curricular activity. Out of the children who participate (n=136); 76% (n=104) of these children participate in active extra- curricular activity while 24% (n=32) of children do not. As a result of increased health problems through children experiencing a lack of physical activity, it is positive that 76% of children surveyed have the opportunity to partake in some form of exercise through their involvement in active extra-curricular activity (Boredom & Riddoch, 2001; Roberts & Foehr, 2004).

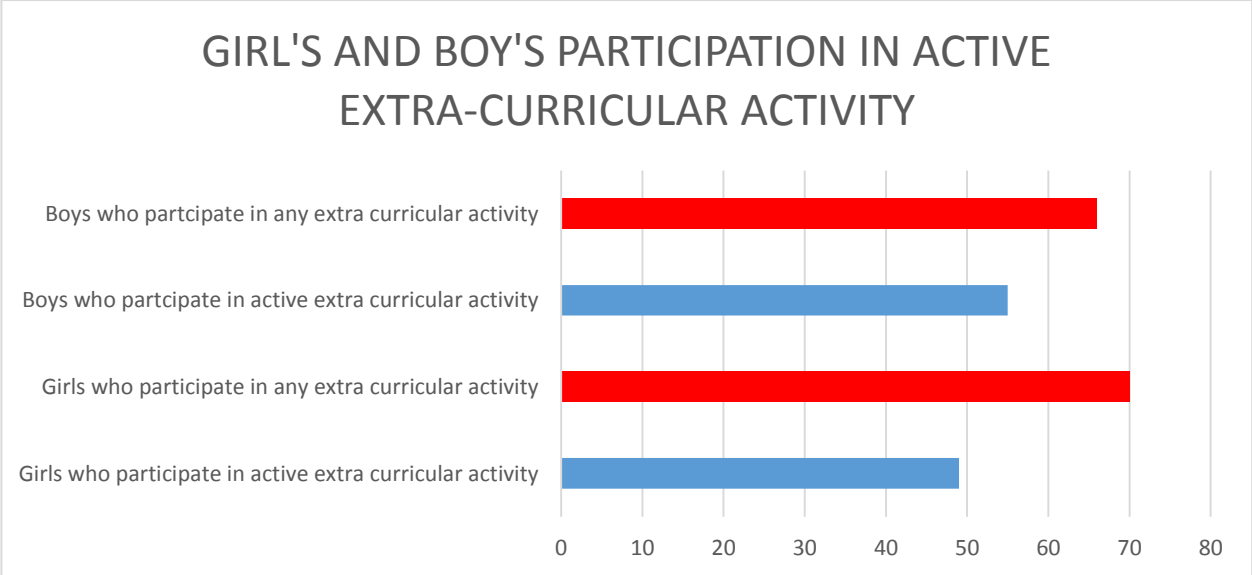

Figure 4.4. Breakdown of girl's and boy's participation in active extra- curricular activity.

Figure 4.4 expresses the breakdown of girl's and boy's participation in active extra-curricular activity. The graph indicates that a greater amount of girls participate in extra-curricular activity generally.

These findings would contradict those of Darling (2005) who claimed boys were slightly more likely to participate in extra-curricular activities than girls. However Figure 4.4 would also suggest a greater proportion of boys partake in active extra-curricular activity; 83% (n=55) of boys participate in active extra-curricular activities while 70% (n=49) of girls participate in active extra-curricular activities. Interestingly, these statistics would coincide with the findings of Darling (2005) who claims girls are less likely to become involved in sporting or active extra-curricular activities.

Guitar	Drama	Homework Club	Violin	Irish Music	French	Drums	Recorder	Art	Choir	Eco Club
17	20	29	6	1	1	3	1	4	10	1

Table 4.5. Represents the amount of children participating in each non-active extra- curricular activity.

Figure 4.5 represents the amount of children participating in each non-active extra-curricular activity. Homework club is the most popular non-active activity with 31% (n=29) of children participating while Irish music, French, Recorder and Eco Club have the lowest participation of slightly over 1% (n=1) children each. This table conveys the vast array of co-curricular and highly structured extra-curricular activities which "compliment student learning" (Kezar and Moriarty, 2000).

Camogie	Gaelic football	Hurling	Volleyball	Active games	Hip hop	Irish dancing
35	*69*	*20*	*12*	*16*	*1*	*2*

Table 4.6. Represents the amount of children participating in each active extra-curricular activity.

Figure 4.6 expresses the amount of children that participate in each active extra-curricular activity. The most popular activity is Gaelic football with 44% (n=69) of children participating while Hip Hop is the least popular activity with less than 1% of children (n=1) participating. This is an indication of the range of active activities available to children in primary schools (Mahony, 2001).

	All Children in survey	Children who participated in extra-curricular activities
Average extra-curricular activities per child	1.74	2.11
Average active extra-curricular activities per child	1.15	1.39

Table 4.7. Represents the average amount of extra-curricular activities each child participated in each week.

Figure 4.7 indicates the average amount of extra-curricular activities each child participates in per week. In terms of all children surveyed (n=165), each child participates in 1.74 extra- curricular activities per week and 1.15 active extra-curricular activities per week. In analysing this data further through using only children who participate in extra-curricular activities, each of these children participates in 2.11 extra-curricular activities per week and 1.39 active extra-curricular activities per week. Participation in these active extra-curricular activities significantly contribute to a child's recommended one hour of exercise per day (World Health Organisation, 2011).

Teachers' Characteristics

The following section will detail statistics gathered in the investigation relating to teacher characteristics. This information will include the teachers' gender, age, experience, subject specialism, led extra-curricular activities and personal activity choices.

Teacher	1	2	3	4	5	6	7	8
Gender	Male	Male	Female	Female	Male	Female	Female	Male
Age	26	31	35	38	42	48	50	53
Experience	4	8	13	9	18	20	30	34

Table 4.8. Represents each teacher's gender, age and experience.

Figure 4.8 is a representation of the gender, age and experience of each of the 8 teachers who were surveyed. There was an even split of male and female teachers (n = 4 female; n = 4 male). The oldest teacher was 53 and he also had the greatest experience of 34 years. The youngest teacher was 26 and he also had the least experience of 4 years. The average age of the teachers was 40 ($\pm$ 9.6) while the average experience was 17 ($\pm$ 10.7). The results obtained from all teachers surveyed would indicate that 75% are aged 30-50. This figure is higher than the UK average of 55% of teachers who aged between 30-50 (School Workforce in England, 2014). In terms of experience, according to Rice (2010) the teacher with 34 years of experience should be the most "effective" teacher. Furthermore these statistics should prove that the teacher with only 4 years of experience should be less effective than the other participants who have over 5 years of experience (Clotfelter, 2006).

Figure 4.9. Represents each teacher's subject specialism.

Figure 4.9 highlights the range of subject specialisms in the survey. One teacher did not have a subject specialism, two teachers were science specialists while the rest of the teachers were specialists in one of the following: French/Irish, Literacy, Maths, History and Geography/PE. The pie chart expresses the wide range of subject specialisms utilised in the data, which should provide an effective indication as to which of these impact on children's participation in extra-curricular activity. The teacher with the Geography/ PE subject specialism should be the most effective at teaching PE or an extra-curricular activity (HM Inspectorate of Education in Scotland, 2001; Starc, 2012).

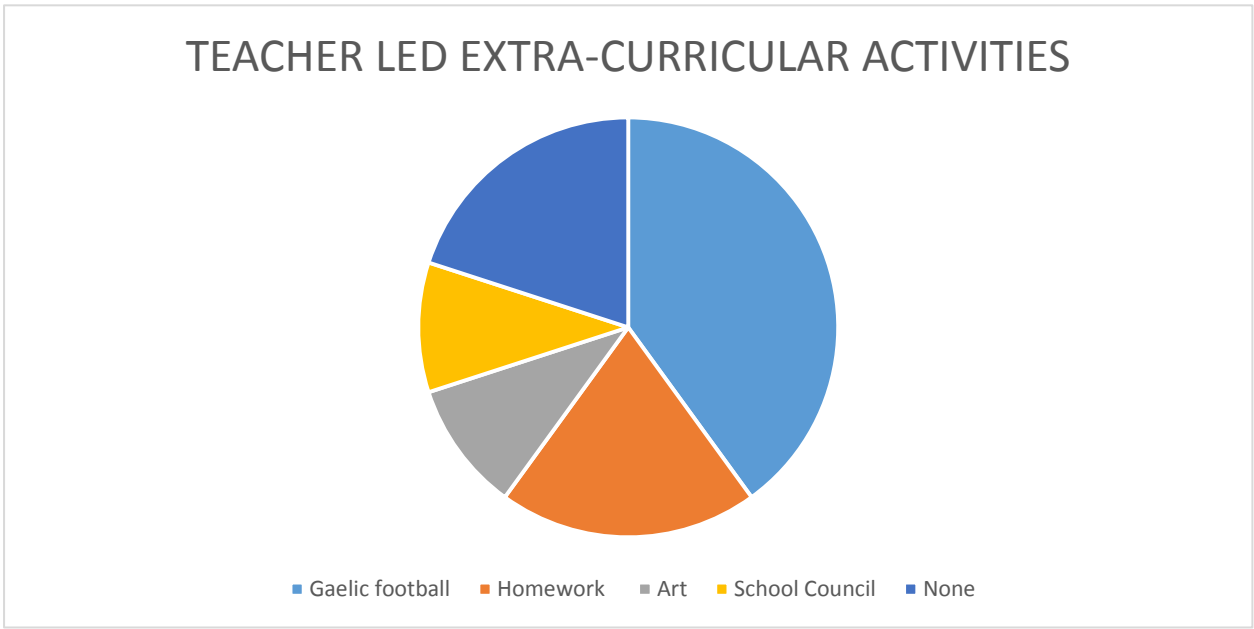

Figure 4.10. Represents the range of extra-curricular activities led by the teachers.

Figure 4.10 portrays the range of extra-curricular activities led by the teachers. The activity which was taken by the most amount of teachers was Gaelic Football;(n=4). The activities taken by the least amount of teachers include Art and School Council; (n=1). The pie chart further illustrates that two teachers fail to take any extra-curricular activities. It is notable that two of the above activities are active, meaning that 50% (n=4) of teachers led an active extra-curricular activity. Silliker (1997) highlights the importance of teachers leading an extra-curricular activity as they can afford children the opportunity to, "master new skills and explore different roles outside of the classroom setting." This viewpoint is further enhanced by Bocarro et al (2008) in stating that through leading extra-curricular activities, teachers are creating an environment which allows pupils to thrive.

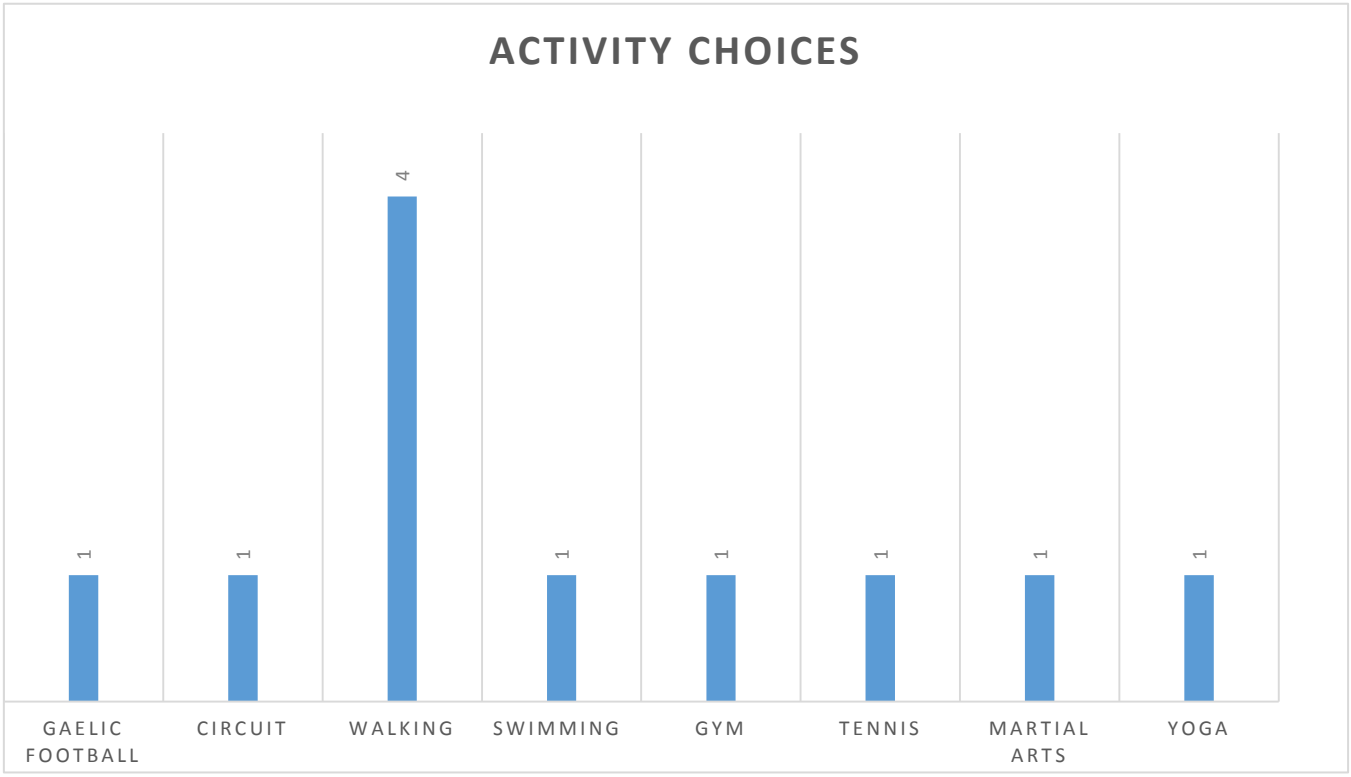

Figure 4.11. Represents each teacher's personal activity choices.

Figure 4:11 represents activities that each teacher partakes in. The most popular activity is walking as 50% (n=4) of teachers partake in walking at least once per week. Each of the other activities are completed by one teacher which include Gaelic football, circuits, swimming, gym, tennis, martial arts and yoga. All of the teachers (n=8) partake in an active activity each week which may encourage their pupils to participate in active activities as teachers can be viewed as role models by their pupils (Hoffman et al, 2009).

Teachers' characteristics influencing pupils participating

The following section presents statistical evidence from the investigation to highlight whether each teacher's characteristics have any correlation with the children's level of participation in extra-curricular activity.

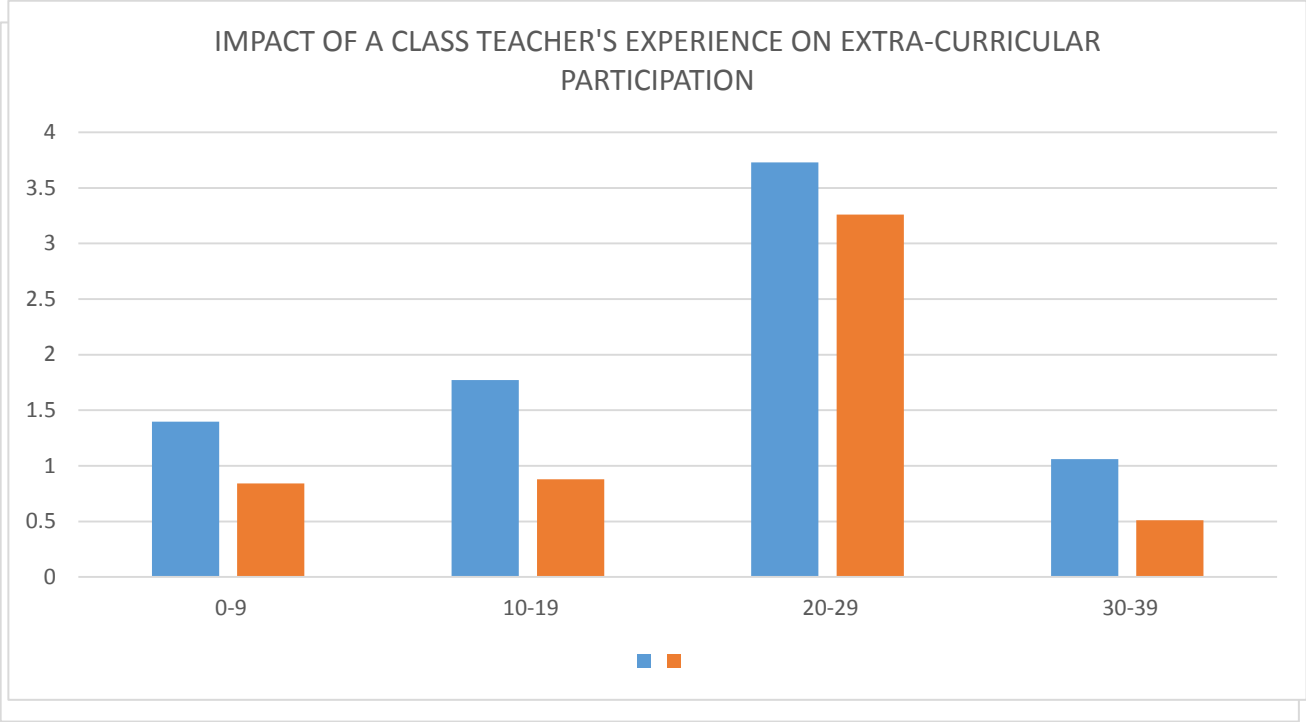

Figure 4.12. Represents the influence of a teacher's gender on children's level of extra- curricular participation.

Figure 4.12 investigates any correlation between children's level of participation in extra- curricular activities and the gender of their teacher. The graph shows that children with a female teacher participate in more extra-curricular activities per week than children with a male teacher. In terms of participation in any extra-curricular activities, children who are taught by a female teacher participate in 0.24 more extra-curricular activities per week than children taught by a male teacher. In examining only active extra-curricular activities, the margins are smaller as children with a female teacher participate in 0.08 more extra- curricular activities per week than those taught by males. Overall one can conclude that this evidence suggests both active and non-active extra-curricular participation is higher when the teacher is female. However one must also consider that the margins are very small and this particular investigation is conducted with a relatively small amount of subjects. It may be the case that if a broader survey was carried out, the results would be different. One could argue that these results indicate that more of the female teachers in this survey acted as role models, inspiring their pupils to participate in more extra-curricular activities (Hoffman et al, 2009). Equally one could argue that more of the children in this investigation responded better to female teachers generally, resulting in greater participation (Dee, 2005).

Figure 4.13: **Represents the influence of a class teacher's experience on children's level of extra-curricular participation**

Figure 4.13 represents the influence of a class teacher's experience on children's level of extra-curricular participation. The graph would provide significant statistical evidence to indicate that a teacher's experience has the greatest impact on extra-curricular participation from twenty to twenty-nine years. The highest value for active participation is 3.26 times per week while the lowest value is 0.51 times per week. The graph further indicates that as experience grows the level of participation will grow up to a certain point. Additionally after twenty-nine years of experience, it will begin to have a negative impact on participation. These findings are linked to the view of Ladd (2008) who suggests that experience will have a negative impact on teaching after twenty-five years.

However, the research would contradict the claim that experience is only relevant during the first five years of teaching (Clofelter et al, 2007; Goe, 2008).

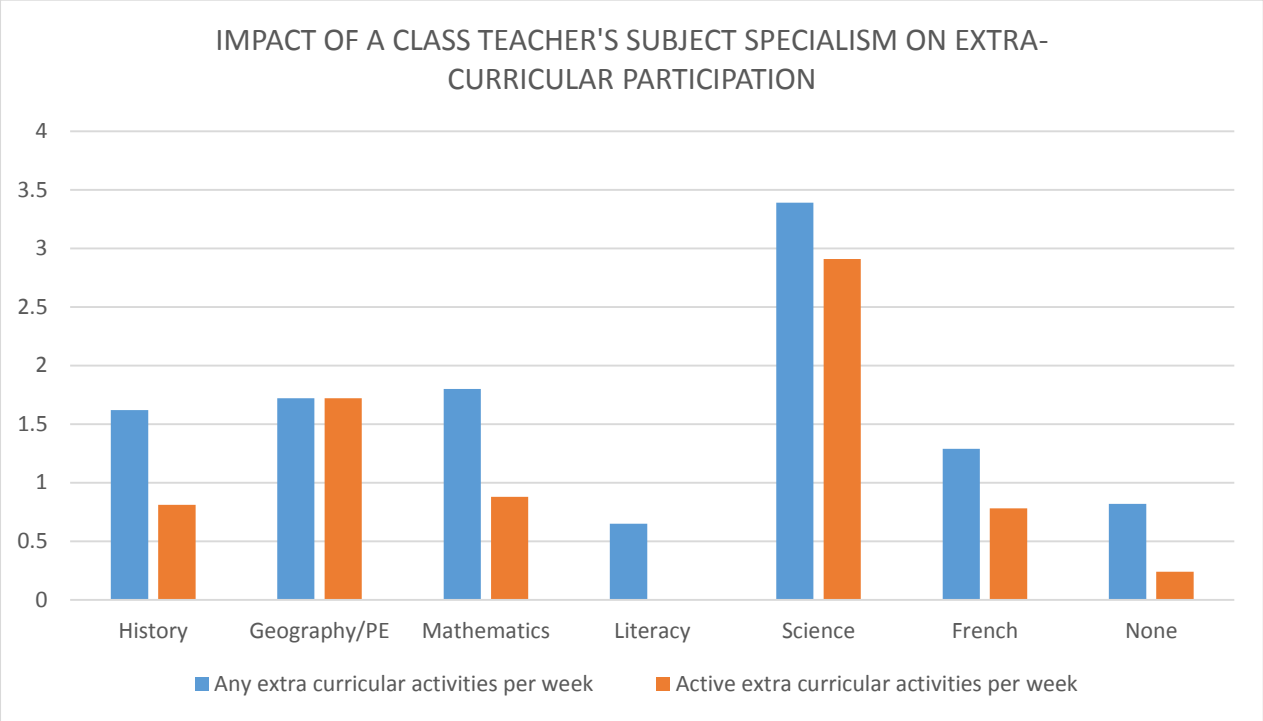

Figure 4.14. Represents the influence of a teacher's subject specialism on children's level of extra-curricular participation.

Figure 4.14 expresses the influence of a teacher's subject specialism on children's level of extra-curricular participation. The greatest level of active extra-curricular participation came from teachers with a subject specialism of Science (3.39 times per week), while the lowest level of participation resulted from a Literacy subject specialism (0 times per week). A teacher's subject specialism can greatly impact teaching in a positive way and can improve the overall quality of teaching (Goe, 2008; Betts et al, 2003). Therefore one may assume that a teacher with a PE background would be a more effective teacher of extra-curricular activities and thus improve overall participation. However the results would indicate that a teacher with a PE background has no significant impact on overall levels of participation; thus supporting the view that there is little link between teacher subject specialism and quality of teaching (Hanushek et al, 2005).

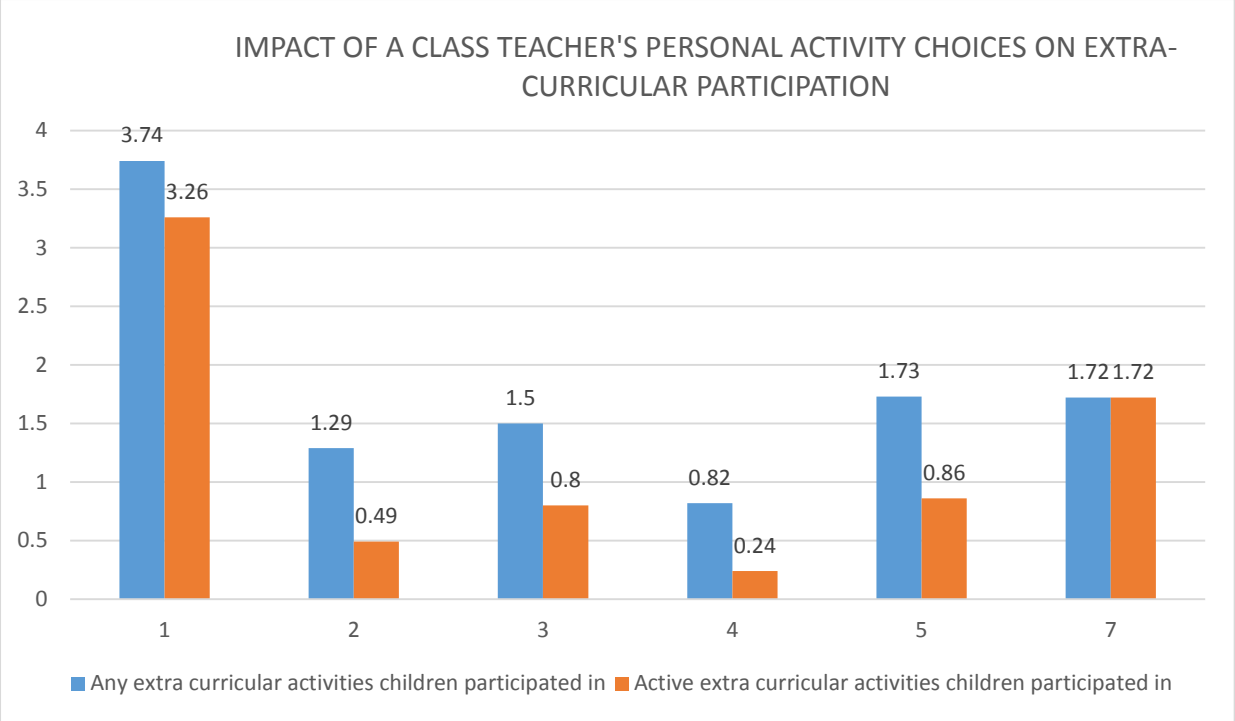

Figure 4.15. Represents the influence of a teacher's personal activity choices on children's level of extra-curricular participation**.**

Figure 4.15 investigates any correlation between a teacher's personal activity choices and children's level of extra-curricular participation. The graph shows that the highest level of children's participation in active extra-curricular activity is 3.26 per week from a teacher who participates in only 1 active activity per week. Therefore the children with the greatest level of participation in active extra-curricular activities are taught by teachers who participate in the least amount of activity. This would suggest a negative correlation between teacher and pupil participation in active activities. However in focusing on data from teachers who exercise 2-7 times per week, it can be noted that children complete more active extra-curricular activities when their teacher participates in more than 5 activities per week. This would contradict the initial observation and portray a positive link between teacher and pupil participation in active activity. One could therefore argue that the statistics gathered for teacher's who participate in one activity are an anomaly. Based on this finding, one could argue that teachers impact child participation through acting as role models (Hoffman et al, 2009).

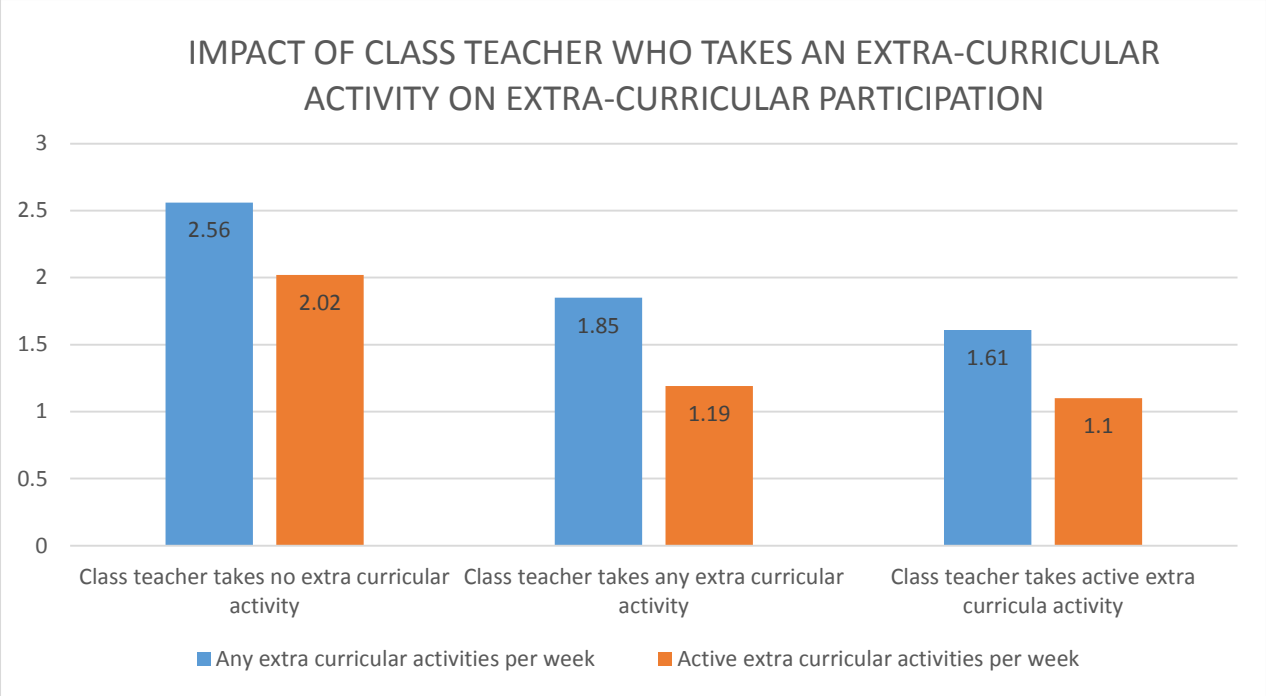

Figure 4.16. Represents the influence of a class teacher who takes extra-curricular activities on children's level of extra-curricular participation.

Figure 4.16 represents the influence of a class teacher who takes extra-curricular activities on children's level of extra-curricular participation. The graph would indicate that children who participate in the greatest amount of active activity are those whose teachers don't take any extra-curricular activity (2.02 times per week). Children who are taught by a teacher who takes any activity participate in less active activity (1.19 times per week). Furthermore, those who are taught by a teacher who takes an active activity participate in the least active activity (1.1 times per week). These results are surprising as one would assume that a class teacher would promote their own extra-curricular activity to children in their class. The enthusiasm of a teacher is critical in generating interest in any activity; this graph would suggest that the teachers surveyed who led an active extra-curricular activity failed to greatly inspire their children to participate (Turner-Bisset, 2013).

Conclusion

After examining and analysing all data, it is apparent that there are conflicting results. Several teacher characteristics express a correlation with participation in active extra-curricular activity while other teacher characteristics demonstrate little correlation. These findings relate to that of Rockoff (2003) who asserts that "studies that estimate the relation between achievement and teacher's characteristics, including their credentials, have produced little consistent evidence that students perform better when their teachers have more 'desirable' characteristics."

As anticipated, there is a direct correlation between teachers' experience and increased levels of child participation in active extra-curricular activities up until a certain point. The results confirmed that when a teacher reaches over 30 years of experience the children's level of participation in active extra-curricular activities began to decrease.

The results also indicated a positive correlation between teacher's personal activity choices and participation in active extra-curricular activity. Ignoring one anomaly with the results, teachers who participate in over five days of exercise teach children who participate in the greatest amount of

active extra-curricular activity; therefore establishing a clear link between increased teacher and pupil active activity participation.

In terms of gender impact, the results exposed that children taught by a female teacher participated in a greater amount of active extra-curricular activity than those taught by a male teacher. Evans et al (1996) suggests that in teaching PE female teachers are more likely to incorporate a child-centred or informal teaching style whilst male teachers predominantly favour a teacher directed or formal teaching style. Based on this evidence, one can presume that children in this investigation are more likely to enjoy an informal teaching style; hence the increased participation when taught by a female teacher.

The results conveyed no significant link between teachers with a PE subject specialism and participation in active extra-curricular activity. Intriguingly teachers who had a science background had the greatest impact on extra-curricular participation.

In analysing the impact on active extra-curricular participation from teachers who take an extra-curricular activity a correlation does exist. However the correlation is a different outcome than was expected; children who participate in the most active extra-curricular activity are taught by teachers who do not take an extra-curricular activity.

Undoubtedly, the research yielded a diverse range of results. Evidence to justify these findings is presented by Rockoff (2003) in stating that when measuring the impact of a teacher's characteristics on students there is a "lack of consistent pattern."

Recommendations

It was hoped that findings of this study would be beneficial in attempting to increase children's participation in extra-curricular activities. In completion of the investigation and analysis of findings one can make several recommendations. In gathering research it soon became apparent that 37% of children did not participate in active extra-curricular activities. Given the vast benefits of active extra-curricular activities this statistic is rather worrying. The investigation has uncovered this issue and it must be dealt with in primary schools. Neglecting the opportunity to participate in regular physical activity, through mediums such as active extra-curricular activities, significantly contributes to childhood obesity for many children (World Health Organisation, 2013). Therefore, schools must aim to improve overall participation in active extra-curricular activities through promotion of a wide range of activities which will appeal to more children. In aiming to improve overall participation several noteworthy trends from this investigation may be of use. In terms of experience, schools may wish to ask teachers who are newly qualified and those with over 30 years of experience to place a greater emphasis on extra-curricular participation as indicated by the results in this study.

The study would reveal no great difference in findings between male and female teachers which warrants a change in approach to promoting extra-curricular activities from either gender. Furthermore the same could be argued for subject specialism which did not indicate any particular correlation. Ultimately it is the role of the school to ensure a great emphasis is placed on providing a range of extra-curricular activities to meet the needs of their children, thus increasing participation.

Limitations

This investigation had several limitations which must be noted. This investigation was carried out on a small scale using restricted resources and budget. Furthermore a limited amount of subjects, from six different schools situated in Northern Ireland, participated in the study. As all data collected is from a limited number of primary schools across Northern Ireland, results obtained from the investigation should not be generalised for the whole population without additional investigation.

Using a questionnaire as a method of researching also provided limitations; social desirability can have an impact while using a questionnaire as subjects supplying answers may answer dishonestly or exaggerate information so that their answers are viewed favorably by society (Patton, 2002). Additionally due to the nature of questionnaires in lacking detail subjects have less capacity to provide a full and accurate response.

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