Cyber Bullying Among Irish Primary School Pupils

Eret Haava
Technological University Dublin, Ireland

Cyber bullying among Irish primary school pupils

A thesis submitted to the Dublin Institute of Technology in part fulfilment of the requirements for the award of Masters (M.A.) in Criminology

By

Eret Haava

September 2017

Supervisor: Dr. Paddy Dolan

Department of Social Sciences, Dublin Institute of Technology

Abstract

Most research on cyber bullying has been carried out at a secondary school level among older children. Because of the sensitive nature of cyber bullying, there is very little research done at primary school level, however more and more it is starting to affect younger children.

As all parents know from their own experiences, children's lives nowadays are influenced by different electronic communication devices and the Internet. In addition to this, year on year they gain access and own them at earlier ages.

Various electronic communication devices, the Internet and social media have many benefits, however they also have been used in a negative way. A survey was carried out among 81 children from the 4th, 5th and 6th classes in the Central Dublin area to access the influence of these phenomena on their daily lives. When we take into consideration the access that children have to these devices and how much time they spend online, it is essential to know how to protect them. Accordingly, the Routine Activity Theory (RAT) approach with its three main factors (motivated offender, suitable target, absence of a capable guardian) was taken into consideration to determine, if it could be used to predict and prevent cyber bullying victimisation among primary school children and also can it be used to prevent it.

The children in this study were heavily influenced by technology (just 8.6% ($n = 7$) did not own any electronic communication devices). 6.4% ($n = 5$) of them had fallen victim to cyber bullying. Considering their young age, this is quite significant figure. Therefore, RAT, which was proved to be applicable in order to predict cyber bullying victimisation, can be taken into consideration when planning cyber bullying prevention strategies.

Acknowledgement

First of all, I would like to thank all the lecturers of the MA in Criminology in DIT Grangegorman for an interesting and challenging two years. It has been a wonderful experience. You have filled my days and many more nights … through which you all have helped me to better myself. You have made me see the world from another angle, where condemnation and retribution have now been replaced with forgiveness, understanding, giving second and maybe even third chances…

I would like to thank my dissertation supervisor, Dr Paddy Dolan, for his patience with me, for those long Skype calls, for the constructive feedback and guidance throughout this process.

I would like to thank my mum, who has always been there for me and believing in me. These last two years would not have been possible without her help!

I would like to thank my friends for their help and support. I would like to thank Oliver who encouraged me to get back into education and I would like to thank Allan for these late night requests for proofreading during the writing process.

Lastly, my sincere appreciation goes out to all the children and their parents/guardians, who agreed to take part in this study and share their experiences.

Table of Contents

CHAPTER ONE

Introduction

1.1   Introduction

Children have used verbal, physical and psychological bullying to hurt, intimidate and harass each other for generations. However, with the help of technology, the latest generation have brought bullying to a new level where the reach and the extent of the harm caused by it can be endless. This new technology orientated online based phenomenon called cyber bullying is putting parents and school officials in a difficult position and poses a challenge when trying to keep children safe at home and in school, both in their physical and online environments.

Technology is developing and changing nowadays with frantic speed. This has changed society in many ways, such that being constantly on a mobile phone, checking the Internet, checking social network account, sending instant messages and emails have become routine in everyone's daily life, including children's. Children have become accustomed to, you could even say dependant on different electronic communication devices, which they are using at rapidly increasing rates at a younger age. In most cases, these devices do benefit children. They help them to connect and communicate with their peers, provide access to valuable information, provide learning and self-exploration opportunities, however they have also been used in negative ways to cause harm and harass others.

The online environment provides a very large 24/7 audience, where most people's behaviour is more relaxed, opened and less restrained. They say and do things which would normally be ruled out in normal face-to-face interactions because of immediate and emotional response. In addition, anonymity, which is peculiar to the online environment, encourages unpredictable but also bad behaviour, which makes people feel less liable for their actions and the things they say while online. As such, the online environment has become a dangerous place with few rules and little oversight.

As children's routine activities have changed, as they spend more time online, and because parents' monitoring of their children's online activity is a challenge, children are at risk of cyber bullying victimisation and also perpetration. Therefore, this study is looking for answers to questions, such as how widespread is cyber bullying among primary school children, what are the factors that encourage cyber bullying victimisation and can Routine Activity Theory be used to predict cyber bullying victimisation? Routine Activity Theory was chosen, because of its clear requirements and because it allows us to draw parallels between the online and terrestrial environments.

1.2 Aim of the Study

The Aim of the Study is to explore cyber bullying victimisation among primary school students. By applying Routine Activity Theory in a cyber bullying victimisation context, I am also looking to find out, can Routine Activity theory to be used to explain but also used to prevent cyber bullying victimisation?

1.2.1 Objectives of the study

The objectives, which guided this study were as follow:
1.   To establish the extent of primary school students' access to different electronic communication devices.
2.   To identify primary school students' online activity.
3.   To assess parents' knowledge of their children's access to different electronic communication devices and their online activity, and to understand the level of supervision provided.
4.   To discover primary school students' experiences with bullying and cyber bullying victimisation.
5.   To explore the influence of age, gender or nationality on cyber bullying victimisation.

6.   To explore does students' availability, accessibility and presence or absence of physical, personal or social guardianship influence cyber bullying victimisation.

1.2.2 Research Questions

Based on the previously mentioned objectives of the study, the research questions that guided this study were as follows:

1.   How widespread is cyber bullying among the sample of primary school students?
2.   What are the factors that encourage/contribute to cyber bullying victimisation among primary school students while living their everyday lives and carrying out their routine activities?
3.   Does students' availability, accessibility and physical, personal or social guardianship, which are requirements for Routine Activity Theory, influence cyber bullying victimisation?

1.3   Rationale of the study

Today's youth are communicating in ways, which are a mystery for many parents and school officials. This new information and communication technology using different electronic communication devices, presents a huge challenge for parents when trying to monitor and supervise their children's everyday activities. These same devices are helping children to connect and communicate with their peers, providing access to valuable information and opportunities for learning and self-exploration. Unfortunately, they have been also used to cause harm. Within a short period, these online/cyber based environments, which have taken over children's lives, have become a dangerous place with few rules and not much oversight. This new online/cyber based phenomenon called cyber bullying can be very challenging, complicated and time consuming to deal with because it can happen in any place at any time.

Research on cyber bullying has only started to thrive from the beginning of the new Millennium. Since then there has been a considerable amount of research done on cyber bullying, which has helped us to understand its nature, prevalence, extent, victimisation and perpetration factors. Unfortunately, because of its sensitive nature little investigation has been done with younger children at primary school level. Although at that age they are becoming automatically more vulnerable to cyber bullying victimisation by way of gaining more freedom to explore the Internet without constant adult supervision. Unfortunately their young age and emotional immaturity will not protect them from the hidden threats contained within the online/cyber environment and social media. Consequently, early negative online experiences can have a profound negative impact on their later social, emotional and cognitive development.

Accordingly, the purpose of this study is to examine cyber bullying among primary school children. Because previous findings on cyber bullying present conflicting results on gender and age, this study is also examining, does gender and age influence cyber bullying victimisation at the primary school level. Thus far previous research on cyber bullying has not paid much attention to children's nationality within the same study. Therefore uniquely this study looks at whether different nationality influences cyber bullying victimisation. Or does it depend on children's access to different electronic communication devices, their time spent online, supervision provided by parents, their computer, technology and Internet knowledge or of their specific online activities?

1.4   Research Methodology

In order to achieve the aims of the study and answer the research questions, a quantitative methodological approach by using survey research design was applied. Received quantitative data, which was gathered through home-based surveys, was analysed by using the IBM SPSS Statistics Data Editor Version 24.

1.5 Organisation of chapters

There are 6 chapters in this study.

Chapter One gives a short overview of cyber bullying. It also introduces the aims, objectives, research questions and rationale of the study.

Chapter Two presents the literature review on cyber bullying, where the dilemma regarding the definition will be discussed. Additionally, the association between traditional bullying and cyber bullying, cyber bullying predictor factors, prevalence, gender and age differences from previous studies will be introduced. Finally, Victimisation Routine Activity Theory will be presented and discussed as to whether it can be applied to explain cyber bullying victimisation.

In Chapter Three the research methodology will be introduced. The chapter introduces objectives, explains the design selection, introduces and explains data sample selection, how the data was collected, analysed and which ethical issues were considered.

In Chapter Four the research findings will be presented and Routine Activity Theory utilised to determine if it can be used to explain and also applied to prevent cyber bullying victimisation.

Chapter Five discusses the findings, which were outlined in Chapter Four. Followed by Chapter Six, where conclusions regarding primary school children and whether Routine Activity Theory is adaptable to explain cyber bullying victimisation among them, will be presented and where limitations regarding this study and cyber bullying studies overall will be highlighted.

CHAPTER TWO

Literature review

2.1 Introduction

A small amount and minor forms of bullying among peers is a normal part of growing up. However, the latest research shows that bullying presents a serious threat to young people's physical and psychological wellbeing, to their healthy development and social functioning (Arseneault, Bowes & Shakoor, 2010).

The same can be said about cyber bullying, which only emerged with the fast technological developments at the beginning of new Millennium. Even though it is relatively new phenomenon, there is currently quite a large body of research and literature that deals with this topic, however not at the primary school level.

In this chapter the definitions of bullying and cyber bullying will be presented, the association between them and criteria associated with them will be discussed. In addition, the prevalence of cyber bullying in previous studies will be reported and differences between gender and age will be highlighted. Routine Activity Theory will be presented and discussed as to whether it can be applied to explain and also applied to prevent cyber bullying victimisation.

2.2 Defining bullying

There has been a considerable amount of research conducted on traditional bullying over the years, yet there is no agreed fixed definition for it. Certain characteristics keep recurring in different definitions but the wording itself keeps changing. This can influence research findings but also make them more difficult to understand. Therefore, the following different definitions of bullying will be presented to help to understand the nature of it.

According to Norwegian researcher Dan Olweus, who has studied the phenomenon for more than 40 years and who is regarded as the founding father of bullying research, 'A student is being bullied or victimized when he or she is exposed, repeatedly and over time, to negative actions on the part of one or more other students' (Olweus, 1997, p. 496).

The Irish Department of Education and Skills (2013, p. 8) policy on Anti-Bullying Procedures for Primary and Post-Primary Schools, defines bullying as '…unwanted negative behaviour, verbal, psychological or physical conducted by an individual or group against another person (or persons) and which is repeated over time'.

Smith, del Barrio and Tokunaga (2013) emphasise that although there is no agreed definition for bullying, three criteria, intent to cause harm, imbalance of power and repetition, have to be present in the behaviour to qualify as bullying. Intent to cause harm is seen as behaviour (physical, verbal, direct or indirect) that is not accidental but intentional and causes harm and/or discomfort to the victim. Because fighting between equals (young people of about the same age and power) does not qualify as bullying, power imbalance can be defined as being physically weaker or verbally less fluent (it is difficult for the victim to defend herself/himself); being outnumbered; having a low status or being rejected among peers; lacking friends, social support, confidence or self-esteem. A one-off act is not seen as bullying, therefore for the behaviour to qualify as bullying, it has to happen more than once or twice, but repeatedly and over time.

Taking into consideration the previously mentioned definitions and characteristics, which reappear from definition to definition, bullying is considered to be a repeated and aggressive behaviour or activity, which intends to hurt another person emotionally, mentally or physically. The following will be discussed, can intent to cause harm, imbalance of power and repetition, which are required criteria for the behaviour/activity to qualify as bullying, be transferred into a cyber environment and how exactly can we determine them in cyber context?

2.3   Defining Cyber bullying

In the last two decades a new form of bullying, perpetrated through different electronic communication devices, has emerged. Labelled as cyber bullying it is described as abusive behaviour carried out through different electronic communication devices and with Internet access. Despite its' novelty, there is a considerable amount of research and literature on the topic. However, there is no fixed definition for it. This causes disagreement and makes research findings difficult to understand, which makes the correct identification, classification and findings on cyber bullying questionable.

Bill Belsey, the founder of bullying.org and cyberbullying.ca, presented one of the earliest definitions for cyber bullying, according to which 'cyberbullying involves the use of informational and communication technologies to support deliberate, repeated, and hostile behaviour by an individual or group, which is intended to harm others' (Belsey, 2005, p. 2).

American researchers Hinduja and Patchin, the creators of cyberbullying.org, who started exploring cyber bullying in 2002 when there was literally no existing research done, defined cyber bullying as 'Willful and repeated harm inflicted through the use of computers, cell phones, and other electronic devices' (Patchin & Hinduja, 2006, p. 152).

The European Parliament study on cyber bullying among young people in 28 EU Member States confirmed, that there is no agreed single definition for cyber bullying at the international or European level. Therefore, it is inevitable that data differs from country to country, as the measurement of the phenomenon differs from country to country, which is also acknowledged in the publication opening chapter (European Parliament, 2016).

Technology keeps developing and changing with frantic speed, which affects the nature, form, method and tactics of cyber bullying (Dennehy, 2016). Cyber bullying can consist of threats, insults, embarrassing or humiliating messages, pictures, video clips, defamation or impersonation (O'Moore, 2014). It can be carried out through

phones, smartphones, tablets, laptops, PCs, gaming consoles and it can be disseminated by phone calls, text messages, picture and video clips, emails, chat rooms, instant messages, personal websites, online gaming, blogs and social-networking sites (Dennehy, 2016; Hoff & Mitchell, 2009; Smith, Mahdavi, Carvalho, Fisher, Russell & Tippett, 2008). Smith, del Barrio and Tokunaga (2013) clarify that all uses of mobile phones (including phone calls) are relevant to cyber bullying.

Therefore, it is necessary to take the research further on this topic and develop a common definition and methodology to avoid making mistakes on interpreting and comparing results in the future and hopefully the findings from this study will be of benefit.

2.4   Bullying v Cyber bullying

Both bullying and cyber bullying are relationship issues (Hoff & Mitchell, 2009) and they are both about possessing/gaining power and control in human relationships (Belsey, 2005). There is a debate ongoing among researchers: should cyber bullying be treated as a new phenomenon, a unique type of bullying, or is it basically a continuation (logical extension) of traditional bullying, where it is basically continued after school hours and carried out through new means, by using modern day technology (Hinduja & Patchin, 2012; Menesini, 2012; Olweus, 2012; Smith, 2012).

Although the methodology, both for traditional bullying and cyber bullying, is to threaten, harass and embarrass others, the use of mobile phones, laptops, computers and other electronic devices to carry out the bullying is the main difference that distinguishes cyber bullying from traditional bullying (Hinduja & Patchin, 2010). The action/behaviour still has to be intentional, not accidental, it has to be repeated, not be one isolated incident and the victims have to feel that the harm was inflicted.

However, the intent to cause harm, the imbalance of power and repetition, which are criteria required for the behaviour to qualify as bullying, manifest different forms

and meaning when transferred into a cyber context. The issues around intent to harm and repetition are more complicated to interpret in cyber bullying than traditional bullying. As mentioned, the act has to intend to harm and be repeated over time. Although in cyber bullying context, the repetition is not carried out by the bully, one single act can qualify under this criteria, because the perpetrator knew and/or expected that it will be seen and repeated by others. In addition, the repetition online can be very rapid and the audience much bigger, which makes bullies feel power and control over their victims. However, the imbalance of power in cyber bullying is seen as perpetrators better technological knowhow and ICT skills but also the perpetrators social status, number of friends and anonymity (Smith, del Barrio & Tokunaga, 2013). This is also confirmed by, Ybarra and Mitchell (2004), who found that cyber bullying perpetrators are generally heavy Internet users, whose Internet skills are more advanced and who are confident in their online activities.

Regardless of the shared common features, traditional and cyber bullying also differ in important ways. Kowalski, Morgan and Limber (2012) emphasise that in the occurrence of traditional bullying, young people are able to escape from it. This is not the option with cyber bullying, which can follow young people at home and therefore happen any time of the day or night, which makes it difficult for victims to defend themselves. In addition to that, when speaking about traditional bullying, the perpetrators are known to their victims; however in the case of cyber bullying, anonymity, which often accompanies cyber bullying, is considered a feature, which makes cyber bullying more damaging and crueler to its victims.

Therefore, anonymity is considered to be an important difference between traditional bullying and cyber bullying. It allows one to say and do things to others, which in normal circumstances, ie: face-to-face interactions, one would never say or do. But at the same time this non face-to-face interaction provides the potential to ignore the perpetrator (block the person). Because of that aspect some students regard cyber bullying as not as serious as traditional bullying (Ortega, Elipe, Mora-Merchán, Luisa Genta, Brighi, Guarini, Smith, Thompson & Tippett, 2012) and they allow that they are strong enough not to let these attacks bother them emotionally (Ortega, Elipe, Mora-Merchán, Calmaestra & Vega, 2009).

Kowalski, Morgan and Limber (2012) also emphasise that although bullying and cyber bullying differ in important ways, the main distinction is anonymity, however in many instances, cyber bullying is not perpetrated by strangers. Ybarra and Mitchell (2004) study found, that 84% of cyber bullying perpetrators knew their target, while 69% of targets were unaware who the aggressor was. Smith et al. (2008) study revealed more shocking results, as only 20.7% of the study participants did not know who bullied them. Therefore, the suggestion that cyber bullying perpetrators and victims often know each other from school, where the interaction between them, including bullying, just simply continues after school through the use of technology, may be justified. According to this, victims of traditional bullying might target their bully online or the perpetrator of traditional bullying might just continue to torment their victim online.

Regardless of the fact, that traditional bullying is more common than cyber bullying (Nansel, Overpeck, Pilla, June Ruan, Simons-Morton & Scheidt, 2001; Ortega et al., 2009), they both have damaging impacts on the majority of victims (Ortega et al., 2012). In addition, not seeing the reactions or the effect cyber bullying has on its victim (hurt, shame etc.), decreases the perpetrators guilt and makes it easier to him/her to bully online (Mishna, Khoury-Kassabri, Gadalla & Daciuk, 2012). Cyber bullying perpetrators do not see the harm they are causing to their victims and therefore they underestimate the power of their words and actions.

2.5   Cyber bullying predictor factors

The European Parliament (2016) study on cyber bullying among young people under the age of 18 found that cyber bullying perpetrators had previously been victims or perpetrators in traditional bullying. This has been confirmed in many studies. According to Espelage, Rao and Craven (2013), face-to-face bullying perpetration at an earlier stage is a predictive factor in cyber bullying perpetration in later stage. That because, face-to-face interactions are unintentionally carried over into the cyber environment. Smith et al. (2008) study also confirmed that many cyber victims were traditional victims and many cyber bullies were traditional bullies, however traditional victims did also tend to be cyber bullies. Kowalski, Morgan and Limber

(2012) study found that young people who are involved in traditional bullying are at greater risk of becoming involved in cyber bullying. Accordingly, although more students are involved in traditional bullying, the majority of those who are involved online are also involved offline (Smith, del Barrio & Tokunaga, 2013).

Ybarra and Mitchell (2004) emphasise that cyber bullying perpetrators and victims are both heavy Internet users who are confident of their Internet abilities. However, poor parental monitoring can have a significant effect on cyber bullying victimisation. Walrave and Heirman (2011) confirmed that both cyber bullying perpetrators and victims are heavy Internet users with great Internet expertise. They found that youngsters, who have computer and Internet connection in their own bedroom with privileged online access, were more likely to engage in cyber bullying perpetration. However, previous involvement in cyber bullying as a perpetrator was the most important predictor of cyber bullying victimisation but also publishing personal information, passing on Internet account passwords to others, chatting online with older acquaintances and chatting in open and closed chat rooms, increased the risk of cyber bullying victimisation.

Hoff and Mitchell's (2009) study found that cyber bullying emerges mainly from relationship problems such as break-ups (which cause feelings of rejection and anger, and can make people seek revenge by cyber bullying), relationship envy (envy arises when friendship or a romantic relationship is rejected), intolerance (cyber bullies are small minded, they want to feel better about themselves while making the victim feel scared, sad, isolated and helpless) and ganging up (to reject and isolate victim from a group). This study illustrates clearly that young people are not able to handle social tensions, especially when they are related to relationship issues.

O'Moore (2014, p. 1) confirms, that 'cyber bullying arises largely from relationship problems (e.g. intolerance, envy, break-ups, and ganging up), which are formed during school hours'. Therefore, it is no surprise, that young people who have been victimised at school, carry their anger and frustration into the cyber world and engage in cyber bullying perpetration (Hinduja & Patchin, 2010).

2.6   Cyber bullying statistics

Because of variations and inconsistency in defining cyber bullying and its constantly changing nature, different studies in different countries among different age groups of young people have had varying outcomes of its prevalence and extent among them, which makes the understanding and researching of this new phenomenon even more complex.

Cyber bullying in Belgium seems to be very widespread. In the Walrave and Heirman (2011) study of 1318 Belgium adolescents, 34.2% of participants reported being victims of cyber bullying and 21.2% admitted to having cyber bullying others.

In the Hoff and Mitchell (2009) study of 351 United States undergraduates, where cyber bullying commonly emerged from relationship problems, 56.1% of the respondents reported having experienced cyber bullying, while 89% of the respondents reported having a friend who had been the victim of cyber bullying. However, an Indonesian study on cyber bullying victimisation among seventh grade students revealed even more shocking results, where approximately 80% of the participants experienced cyber bullying victimisation occasionally to almost every day (Safaria, 2016).

In the United Kingdom, the Smith et al. (2008) study among 11-16 year olds, showed different results. 10.4% of participants reported being cyber bullied during the current year, however 19.4% of the students reported being victims of traditional bullying during the current term.

On the framework of EU Kids Online, O'Neill and Dinh (2013) found that 4% of Irish 9-16-year old surveyed had experienced bullying online or by mobile phone. This number increased to 13% on the framework of Net Children Go Mobile, which was also carried out by O'Neill and Dinh (2015) among 9-16-year old Irish children.

2.7   Cyber bullying and gender

The gender differences among cyber bullying victims and perpetrators vary somewhat between different research findings. Smith et al found (2008) no significant gender differences between cyber bullying victims and perpetrators.

Kowalski, Morgan and Limber (2012) reported significant gender differences in traditional perpetration and cyber victimisation, but not in traditional victimisation and cyber perpetration. According to the study boys were more frequently involved with traditional bullying perpetration than girls, while girls were more frequently victims of cyber bullying than boys.

The Walrave and Heirman (2011) study found that boys are more inclined to engage in cyber bullying and that girls are significantly more likely to become victims of cyber bullying. The Hoff and Mitchell (2009) study, where cyber bullying most commonly emerged from relationship problems, reported similar results, 72.1% of females and 27.9% of males reported being victims of cyber bullying.

According to Ortega et al. (2009), and confirmed by Kowalski, Morgan and Limber (2012) cyber bullying is more prevalent among females than males. That because cyber bullying provides females different ways to be aggressive without using physical violence (Mishna et al., 2012).

The European Parliament (2016) study on cyber bullying among young people under the age of 18 found that girls are generally far more likely to be victims of cyber bullying in most EU Member States. The victimisation ratio in Luxemburg and Czech Republic was as distinct as 90% girls versus 10% boys. Poland observed no gender differences in victimisation and Bulgaria was the only country where most victims were boys. On cyber bullying perpetration the gender differences were not as distinct and indicated that girls and boys tend to be equally involved as perpetrators. However, cyber bullying was mostly perpetrated by girls in Ireland and by boys in Austria, Belgium and Estonia.

The previously mentioned studies have shown mixed results when trying to determine whether girls or boys are more involved in cyber bullying perpetration and/or victimisation. Navarro's (2016) study on gender issues in cyber bullying, which introduced mixed results from different studies from all over the world, confirmed gender based mixed results and found that cyber bullying is not a gender-specific behaviour. Despite the fact that direct aggression (more peculiar to traditional bullying) is more prototypical for boys and indirect aggression (more peculiar to cyber bullying, which is seen as emotional and psychological strategy, which involves greater planning and premeditation) is more prototypical for girls, researchers, rather than concentrating only on gender, should concentrate on the relationship between cyber bullying and gender identity. Navarro argues that gender-typed beliefs are the reasons, which are making young people more vulnerable to cyber bullying.

2.8   Cyber bullying and age

Age differences in cyber bullying victimisation and perpetration in previous research findings also vary. The Walrave and Heirman (2011) study among adolescents found that incidents of cyber bullying increases slightly with age, however significant difference was observed among bullies and non-bullies, where bullies were found to be slightly older than non-bullies. This was also confirmed by the Smith et al. (2008) study among 11-16-year old UK students, where cyber bullies were never from lower ages than their victims.

The European Parliament (2016) study on cyber bullying among young people under the age of 18, found that 13-15 year olds are most exposed to cyber bullying. However as previously acknowledged, perpetrators tend to be older than their victims and cyber bullying tends to decrease after adolescence. The Ybarra and Mitchell (2004) study among 10-17-year old American youth confirmed that cyber bullying is associated with older rather than younger teens.

Navarro (2016) on his research on gender differences, where he compared results from different studies from around the world, found, that although there are no clear

differences between girls and boys in cyber bullying, girls were more likely to be involved in cyber bullying in early adolescence, while boys in later adolescence.

Mishna et al. (2012) emphasise that while traditional bullying decreases with age, this isn't the case with cyber bullying. According to Ortega et al. (2009), being a victim of traditional bullying starts to decrease significantly from 12 to 17 years, however cyber bullying victimisation peaks at around 14 years of age.

2.9   Cyber bullying and nationality

Living abroad is making people look for ways to keep in touch with family members, close relations and friends left behind. Modern day technology with free or low cost communication tools helps people to feel connected and present in each other's lives. However, they can also pose a risk.

Thus far previous research on cyber bullying victimisation and perpetration has not paid much attention to children's nationality within the same study. However, a participant's culture and cultural values have shown variations in bullying frequency and prevalence (Walrave & Heirman, 2011).

According to the Central Statistics Office (2017, p. 50), there were 535,475 non-Irish nationals from over 200 different nationalities living in Ireland in April 2016, which formed 11.6% of Irish population. Because there were 25 nationalities represented in this study and because 35 families identified themselves as Irish, 33 as non-Irish and 12 as mixed, nationality was chosen as a variable and compared with cyber bullying victimisation.

2.10   Routine Activity Theory and Cyber bullying

Barnicoat (2014) argues that victims suitability and availability are the strongest correlations to experiencing cyber bullying. Different electronic communication devices, the Internet and social networking sites have become routine/normal parts of

young people's everyday lives. This, in turn, has made young people easily available to everybody online and left them vulnerable to the dangers and risks, which are associated with the cyber environment.

Espelage, Rao and Craven (2013) emphasise, that when trying to develop and implement effective prevention and intervention strategies and approaches, it is always a good idea to look first at, what different sociological, criminological and psychological theories have to say about why people are entering into this kind of behaviour. Victimisation theories, such as lifestyle exposure theory, victim precipitation theory, deviant place theory and routine activity theory are all attempting to explain the causes of victimisation (Siegel, 2011). They are trying to explain why certain individuals in various situations become victims of crime.

Routine activities and lifestyle have been acknowledged as being the main causes of victimisation (Henson, Wilcox, Reyns & Cullen, 2010). According to Cohen and Felson (1979) everyday routine activities make it possible for illegal activities and crime to occur. In addition, Routine Activity Theory has been used widely to study various forms of cybercrime, including cyber bullying victimisation (Arntfield, 2015; Hutzell, 2014; Navarro & Jasinski, 2012; Ngo & Paternoster, 2011). Therefore, because of its straightforward approach and clear requirement (visibility, accessibility and guardianship), which allows us to collate the terrestrial environment to the virtual environment, Routine Activity Theory was chosen in this study to determine if it could be used to explain and also used to prevent cyber bullying victimisation.

2.10.1 *Routine Activity Theory (RAT)*

Routine Activity Theory and approach was first presented in 1979 by Lawrence Cohen and Marcus Felson in their article "Social Change and Crime Rate Trends: A Routine Activity Approach". Previously the majority of criminological theories were dispositional in their nature, which means they neglected direct situations in which crime occurred and they focused on the offenders, their background, experiences, motivations and factors (biological, psychological, social, economic, cultural), which

inclined them toward offending and committing a crime. However routine activity approach was considered to be situational in its nature, which means that it moved its attention away from the offender and focused on the broader context and situational factors, which affected and shaped offending (O'Brien & Yar, 2008). It moved its focus on activities away from households, because major social changes in society had changed trends in people's routine activities (Cohen & Felson, 1979).

According to Crawford and Evans (2012), the rise in crime figures since the 1960s are due to the social changes in society, which saw an increasing number of women getting more involved in the labour market and which therefore left many households unattended and more vulnerable during the daytime, increased suitable targets and decreased the availability of capable guardians.

To explain the tremendous growth in property crime, Felson and Cohen came up with routine activity theory, which is considered as being the extension of lifestyle exposure theory but where in addition to a suitable target, two additional elements, motivated offender and capable guardianship, are added. According to the theory, criminogenic events occurs when three factors convergence in space and time: a motivated offender (1) who comes into contact with a suitable target (2) in the absence of a capable guardian (3) (Leukfeldt & Yar, 2016). Therefore, victimisation is explained by targets suitability and accessibility to a motivated offender in the absence of a capable guardian, which according to the theory is most important factor to reduce victimisation (Cohen & Felson, 1979). However, victimisation is shaped by routine activities, which make possible for illegal activities and crime to occur.

Routine activities are seen 'as any recurrent and prevalent activities which provide for basic population and individual needs, whatever their biological or cultural origins. Thus routine activities would include formalised work, as well as the provision of standard food, shelter, sexual outlet, leisure, social interaction, learning and child rearing' (Cohen & Felson, 1979, p. 593). These routine activities can take place 'at home, in jobs away from home, and in other activities away from home' (Cohen & Felson, 1979, p. 593). Therefore, while carrying out everyday life routine activities, there are three necessary elements required for a potential criminogenic

and victimisation occurrence: a motivated offender, a suitable target and the absence of a capable guardian. The absence of a capable guardian provides easy access for an offender to victimise the target and therefore enables the offender to commit the crime. Thus, if any of these elements are missing, then the likelihood of a victimisation occurrence will be decreased or eliminated.

Regarding motivated offenders; the first required element for crime to occur, Cohen and Felson (1979, p. 589) emphasise that routine activity approach '…do not examine why individuals or groups are inclined criminally, but rather we take criminal inclination as given and examine the manner in which the spatio-temporal organisation of social activities helps people to translate their criminal inclinations into actions.' According to this, the presence and supply of individuals, who have motivations to offend and who are choosing offending over obedience, is always there (Crawford & Evans, 2012).

The second required element in routine activity approach is a presence of a suitable target. According to Cohen and Felson (1979, p. 591) 'target suitability is likely to reflect such things as value (i.e., the material or symbolic desirability of a personal or property target for offenders), physical visibility, access, and the inertia of a target against illegal treatment by offenders (including the weight, size, and attached or locked features of property inhibiting its illegal removal and the physical capacity of personal victims to resist attackers with or without weapons).' Therefore the more valuable (which can depend on money, style or fashion and which makes target more tempting), more visible (for example valuable items on visible display in the car, which increases the chances/opportunities for targeting), more accessible (for example opened windows or unlocked doors, which provide easier access) and with better inertia (which means that smaller, lighter and portable items would be better targets because they are easier to remove), the chosen target is, the higher is the chance the offence/crime to take place (O'Brien & Yar, 2008).

The absence of a capable guardian, somebody or something, who with its presence prevents an offence, who might intervene to stop an offence or even only by witnessing it, is the third required element in routine activity approach (Crawford & Evans, 2012). O'Brien and Yar (2008) clarify that guardianship can be seen as

people or objects, which prevent a crime from occurring. Cohen and Felson (1979, p. 590) emphasize, that 'guardianship is implicit in everyday life', but 'daily work activities separate many people from those they trust and the property they value', leaving them unattended and unguarded, which in turn allows Cohen and Felson (1979, p. 591) to argue, that 'the timing of work, schooling and leisure may be central importance for explaining crime rates'.

2.10.2   Connecting the old and the new

Previously established different criminological theories have been used to explain offending and in this case, victimisation in the terrestrial world, where physically present offenders and victims/targets are there for everybody to see. But how can these theories be legitimately applied to the virtual world, where the lack of visibility and the cloak of anonymity present a difficult issue?

Routine Activity Theory was chosen to explain cyber bullying victimisation in this study. Although RAT was formerly used to predict property crime (Cohen & Felson, 1979) and it focused on how daily routine activities of individuals created opportunities for them to be victimised, it seems to be quite adaptable, transposable and repeatedly nominated theory among researchers for addressing cybercrime and in trying to explain online offending and victimisation (Kigerl, 2012; Leukfeldt & Yar, 2016; Ngo & Paternoster, 2011; Yar, 2005). According to RAT the necessary requirements for a crime to happen are the presence of a motivated offender, a suitable target and the absence of a capable guardian. Motivated offender is considered to be someone who will commit a crime if opportunity allows it. Suitable target is seen as one/anything (person or object) the motivated offender values. An absence of capable guardian means however, there are no obstacles in the offender's way to reach the target. All of these elements/requirements are present while online. The concepts of motivated offender, suitable target and capable guardian seems to find a fit in the virtual environment, because their meaning and nature are transposable and adaptable from the terrestrial environment. Each cyber bullying incident requires an offender to carry out the cyber bullying incident, an individual proving to be a suitable target for the cyber bully and the absence of capable

guardian who would prevent the cyber bullying incident from occurring whether the guardian is physical or personal.

The online environment provides good resources for different illegal activities to motivated offenders. At the same time an online environment makes suitable targets more vulnerable, especially when talking about young people, because of a lack of guardianship, which is very common. Therefore, young people's exposure to motivated offenders, their risky online behaviour/activities and absence of a capable guardian, whether it is technical or personal, provides opportunities to the offenders and increases their chances for victimisation.

There are a few distinctive features, which are peculiar to victimisation in routine activity theory. Henson et al. (2010) find that lifestyles and routine activities are age and gender graded. When children are younger, their routine activities are structured and they are better monitored/guarded. Moving into adolescents, their peer-oriented leisure and routine activities are taking over and are becoming differently structured, which puts them more in danger/risk, because they are not as closely supervised anymore, therefore guardianship, which would act as a buffer, decreases. In addition to that, boy's lifestyle and routine activities tend to be more risky than girls, whose lifestyle and activities are more structured and supervised/monitored.

Guardianship is implicit in children's everyday life. When they get older and become adolescents, everything changes. As we know from our own experience, adolescence is the main time to form peer groups and social networks. This is the period when young people have a decreasing level of supervision by parents and an increasing salience of peer group influence. Therefore, it is no surprise, that adolescents, who are becoming more active outside the home, and engage more in peer group activities rather than family activities, have been recognised as being the most vulnerable to cyber bullying occurrence and victimisation. Already Cohen and Felson (1979, p. 594) stated 'that household and family activities entail lower risk of criminal victimization than nonhousehold-nonfamily activities'.

In routine activity theory a capable guardian is a necessity. But how do we understand guardianship in a cyber world context? Originally capable guardians were

seen as persons (social guardians such as police, homeowners, neighbours, roommates, pedestrians) or objects (physical guardians such as physical security measures for example locks, alarms, barriers, lightning on streets or at home etc.), which prevented crime from occurring. The absence or presence of a capable guardian determines whether the offence will take place. Therefore, a physical presence or direct action helps to avoid crime occurring. According to Ngo and Paternoster (2011), guardianship in cyber context comes in other forms, mainly physical and personal. Physical capable guardians can be seen as different computer software, anti-virus software, firewall programs and use of filtering systems. However technical knowledge, computer skills and awareness of online risks qualify as personal capable guardians. Considering the previous list and talking about cyber bullying, guardianship can also come in other forms, such as monitoring a child's online activity, staying in the room while child is using the computer, online bystanders such as peers or officials who exercise perpetual vigilance in chat rooms (such as network administrators), which are called social guardians (Leukfeldt & Yar, 2016).

Unfortunately, quite often parents think that different parental controls installed on a computer will act as a replacement guardian. It is true, parental controls can prevent young people from entering certain websites, but parents quite often do not realise that these parental controls are not able to filter what young people say or do on the websites where they are allowed to access. This is one of the reasons - the absence of capable guardians - why routine activity theory is most suitable to explain why victimisation is more prevalent for certain groups and certain type of victimisation, and why it is also the most prevalent theory to explain cyber bullying victimisation among young people.

2.11   Conclusion

As seen in this chapter, the results on cyber bullying prevalence, age, gender and predictive factors vary among different studies. The results may vary, because the definition of cyber bullying differs between studies, where different measurement instruments have been used. Therefore, by applying Routine Activity Theory (RAT) elements, students' availability, accessibility and presence or absence of physical, personal or social guardianship) to a cyber bullying victimisation context, I am interested in finding out about how prevalent cyber bullying is among primary school children. What are the factors that encourage/contribute to cyber bullying victimisation? Can RAT be used to predict but also used to prevent cyber bullying victimisation? I am also hoping that this study will be of benefit in finding a general framework, to avoid any misinterpretation in cyber bullying victimisation studies.

CHAPTER THREE
Research Methodology

3.1   Introduction

Children's rights and children's issues have recently received increasing attention from society and it has been recognised that children's voices should be heard (Dennehy, 2016). Thus there is a growing need for research that focuses on children's opinions, attitudes and behaviours and the data should be collected directly from them with their perspectives, opinions, attitudes and behaviours (De Leeuw, Borgers & Smits, 2004).

In this chapter the research methodology will be outlined. The chapter introduces research objectives, explains the research design selection, introduces and explains data sample selection, how data was collected, how received data was analysed and which ethical issues were to be considered. Present research uses quantitative methodology and quantitative techniques to answer research questions, which were outlined in the introduction.

3.2   Research Objectives

White (2009) emphasised that specific research objectives help to decide what is to be achieved in the study, they help to formulate research questions, make designing and planning data collection and analysing it much easier for the researcher. Kelly (2012) adds that objectives must be clear, because they guide the researcher what she/he has to do to achieve the aims of the study and thus address the research questions.

With time, researchers understanding of cyber bullying, its nature, extent, prevalence, perpetration and victimisation factors have improved. Unfortunately, this cannot be said, when talking about younger children at the primary school level. This is because there has not been much research done due to the sensitive nature of cyber bullying. Although at this age children are becoming automatically more vulnerable

to cyber bullying victimisation, because they are starting gain more freedom to explore the Internet by themselves without constant adult supervision. However, their young age and emotional immaturity will not be able to protect them from the hidden threats contained on the Internet and social media.

Therefore, the purpose of this study was to explore and inform parents, school leaders and policymakers about primary school student's access to different electronic communication devices, identify their online activity and their exposure to and experiences of cyber bullying victimisation. In addition to this, the study explored whether Routine Activity Theory could be applied to explain and also to prevent cyber bullying victimisation.

The objectives, which guided this study were as follow:

1. To establish the extent of primary school students' access to different electronic communication devices.

2. To identify primary school students' online activity.

3. To assess parents' knowledge of their children's access to different electronic communication devices and their online activity, and to understand the level of supervision provided..

4. To discover primary school students' experiences with bullying and cyber bullying victimisation.

5. To explore the influence of age, gender and nationality on cyber bullying victimisation.

6. To explore does students' availability, accessibility and presence or absence of physical, personal or social guardianship influence cyber bullying victimisation.

3.3 Research Design

The study on "Cyber bullying among Irish primary school pupils" is a quantitative research, which examines 4th, 5th and 6th class student's access to different electronic communication devices and Internet and their experiences and exposure to cyber bullying. Creswell (2014) emphasises that quantitative research study involves collecting and analysing numerical data using statistical techniques to explain a

particular phenomenon. Kelly (2012) specifies that survey and experiment are two main quantitative research designs.

This study used quantitative data collection with survey research design, which was descriptive in nature, where questions were easily understood and answers had simple limited choices. That was because according to De Leeuw, Borgers and Smits (2004) with children between ages 7 to 10, it is recommended to ask simple yes/no questions, which they understand better and are therefore able to give more informative answers. Because of participant's young age, there was no time frame given on any of the questions.

Therefore, to find out about children's experiences and exposure to cyber bullying victimisation, a survey was carried out to assess children's access to different electronic communication devices and the Internet, to identify their online activity and time spent online, to find out about their parents' knowledge of their access to different electronic communication devices and their online activity and whether and/or how well they are supervised while online.

3.4   Data Sample

Dale (2006) emphasises that the sample must be able to provide accurate, valuable and reliable data and to be able to apply this data to represent the general population of interest. Therefore, a good sample would be a very small version of whole population, which is unfortunately very difficult to achieve.

Because of the nature of the study and the age group of the participants, this study uses the convenience sampling method. Kitchenham and Pfleeger (2002) refer to as availability sampling, where the sample is selected because they are easily accessible, they are available and willing to participate. Etikan, Musa and Alkassim (2015) refer convenience sampling as affordable, easy, accessible and readily available, which disadvantage they considered to be homogeneous target population and therefore it should never be used to make general conclusions and represent overall population.

This research was carried out among 162 participants, of whom 42 were 4th, 5th and 6th class boys (9-13 year olds) and 39 were 4th, 5th and 6th class girls (9-12 year olds) from primary schools in Central Dublin area and 81 participants were the parents/guardians of these boys and girls. This age group was chosen because there has not been much research done about cyber bullying among primary school students. These schools were chosen because I knew the principals as my son has been a student in both schools. Regardless that the schools were Catholic primary schools, they were very multinational and multicultural. 81 families of 25 different nationalities were represented, which provided a reasonably representative mix to examine.

3.5   Procedure

First and foremost, the ethical clearance to survey the students and their parents was granted by the Head of School in Dublin Institute of Technology (DIT) in Grangegorman.

As is the requirement for every study and to increase the likelihood of a good study, the questionnaires were tested for validity, reliability and question clarity (Van Teijlingen & Hundley, 2001). The pilot study sample included 6 children from 4th, 5th and 6th class and their parents, and 6 different nationalities were represented. This versatile sample was chosen because the participating schools were also very multinational and multicultural. Beforehand all participants were introduced to the objectives of the study, they were asked to fill in the questionnaires independently without any interruptions, they were asked not to check each other responses and record the time taken. Afterwards all participants were asked were there any difficult or ambiguous questions. Because of language barrier, participants were asked were there any difficult words used, which made it difficult to properly understand the meaning of questions and responses. After reviewing and analysing the pilot study feedback, any necessary changes were made. In some questions sentence construction was changed and vocabulary in some questions were changed to be more child friendly. Wherever responses expected children to respond numerically,

they were asked to write out the number (such as none, one, two, three, four and so on), to avoid misunderstanding.

Following this, a meeting was arranged with the two school principals, where the research topic was discussed, research aims and objectives explained. After clarifying the purpose of the study, an informational letter about the survey was given to the principal. This contained the statement that research ethics approval has been granted by the Head of School in DIT, an information letter to the principal, the principal consent form, examples of the information letter to the parents/guardians, the parent's consent form, the student consent form, the parents survey and the students survey. After receiving a signed Principal's Consent Form and approval to carry out the survey among the students and their parents/guardians, each class teacher received samples of the information letter for participants, the letter to the parent, the parental consent form, the student consent form, the parent survey and the student survey, which students would be asked to bring home. According to schools student's enrolment numbers, 81 research envelopes were handed out to girls schools, where the 4th class teacher received 32, the 5th class teacher received 28 and the 6th class teacher received 21. 80 research envelopes were handed out to boys school, where the 4th class teacher received 23, the 5th class teacher received 26 and the 6th class teacher received 31.

Data collection took part over the last two weeks of the school year. Class teachers were asked to hand out research envelopes, which contained the information letter for participants, a letter to the parents, the parental consent form, the student consent form, the parental survey, the student survey and an empty envelope to all students who were attending school on the last two weeks.

Due to the sensitive nature of the research and the fact that participants were primary school students, it was decided to collect the data from the students and their parents/guardians for the study using a home based survey, which should be carried out under the supervision of children's parents/guardians. In the Information letter for participants, it was made clear that both students and parents were under no obligation to participate in the study. However, if they decided to take part, both were required to sign consent forms. Children and their parents/guardians were

informed that it would take around 10 minutes to fill in the survey and they were asked to be completely honest when answering the questions. They were assured that their answers would remain anonymous, that they will be used only for educational purposes and only reported in terms of group findings. Parents were requested not to influence children's answers, check or compare them with their answers afterwards. If children and their parents/guardians felt that the question was too personal and they did not wish to answer, to avoid any potential distress, discomfort or any chance for further victimisation, they could just decline to answer and skip this question.

All children and parents/guardians who were interested in participating in the study were asked to make sure to sign a parental consent form and a student consent form, to fill in both surveys, place these documents into the provided empty envelope and return it to the class teacher. In total 161 research envelopes were handed out and 86 envelopes were returned, which gave overall response rate 53.42%.

3.6   Measures

According to research there is an obvious relationship between traditional bullying and cyber bullying in the sense that victims of traditional bullying frequently become victims of cyber bullying (Kowalski, Morgan & Limber, 2012). As children's technological knowledge grows, the prevalence of cyber bullying increases (O'Moore, 2014). Cyber bullying aggressor/victims are generally heavy Internet users, who are confident of their online activities (Ybarra & Mitchell, 2004). Young people, who spend more time on the Internet (Kowalski & Limber, 2008; Mishna et al., 2012; Wolak, Mitchell & Finkelhor, 2007) and young people, who own computer with privileged online access (Walrave & Heirman, 2011), are more likely to engage with online bullying behaviour. Using different electronic communication devices at home in private places, such as child's bedroom, rather public area at home, puts children in higher risk of cyber bullying victimisation (Sengupta & Chadhuri, 2011). Therefore, it is no surprise that the proposed Internet Access for Minors Bill 2017 is planning to ban retail outlets from selling a mobile phone with Internet access to children under the age of 14, forbid parents from allow their children, under the age

of 14, to own devices with full Internet access and for children, born after 2015, to own portable devices altogether (Fitzgerald, 2017).

Cyber bullying occurs in online environment, which provides motivated offenders good resources for different illegal activities. Because children are spending more and more time in online environment, their online activities are making them more vulnerable to motivated offenders. According to the Routine Activity Theory (RAT) victimisation occurs when three factors convergence in space and time: a motivated offender, a suitable target and lack of capable guardian. If any of these factors are missing, then according to the theory crime is less likely to occur. However, absence or presence of a capable guardian determines whether the cyber bullying is taking place or not. But we have to keep in mind that although guardianship is implicit in children's everyday life, especially at a young age, it comes in different forms in an online environment (physical, personal and social) and therefore needs a different approach. Accordingly, based on RAT, independent and dependent variables were created, which tried to determine does time spent online, children's online activities, access to different electronic communication devices, the presence or absence of physical, personal and social guardianship and background variables such as gender, age and nationality influence cyber bullying victimisation.

3.6.1   Independent variables

'Independent variables are those that (probably) cause, influence, or affect outcomes' (Creswell, 2014, p. 52). Therefore, based on Routine Activity Theory and based on previous research, the independent variables by cyber bullying victimisation is measured are exposure to a motivated offender / target availability to motivated offender, target suitability, capable guardianship and background variables such as children's age, gender and nationality.

3.6.1.1 Exposure to motivated offenders.

To measure potential exposure to motivated offenders (targets availability to motivated offenders), children were asked how many hours per day they spent on the Internet and how many times per day they engaged in the following activities: talk on a mobile phone, send text messages, send instant messages, game online, watch videos on the Internet, browse the Internet, use chat rooms and checking their social network accounts. The children's responses were broken down and 4 separate categories were derived, where 0 equated none/none; 1 equated to 1 minute to 2 hour / 1-5 times a day; 2 equated 3-4 hours / 6-10 times a day; and 3 equated 5-6 hours / more than 11 times a day.

3.6.1.2 Target suitability.

To measure target suitability, children were asked different questions about their online activities that indicated their attractiveness as a suitable target for cyber bullying victimisation. Children were asked do they have access to the Internet at home all the time? Until what time they are allowed to use their electronic communication devices during the week and at the weekend? Do they use mobile phone, tablet, laptop, PC and gaming consoles to communicate with their friends? Do they use Snapchat, WhatsApp, Facebook, Instagram, Viber, Skype, Musical.ly and/or Twitter to keep contact with their friends?

3.6.1.3 Capable guardianship.

Capable guardianship was measured through physical guardianship, personal guardianship and social guardianship.

Physical guardianship can be seen as different computer software, anti-virus software, firewall programs, parental controls and use of filtering system. It was measured by asking parents is there is any blocking filters/parental controls used on

the child's different electronic communication devices, such as mobile phone, tablet, laptop, PC and gaming consoles.

Personal guardianship can be seen as technical knowledge, computer skills and awareness of online risks. Personal guardianship was measured by asking children how would they rate their computer, technology and Internet knowledge? Have they ever had a conversation with their parents about Internet usage safety? Do they know how to override parental control/blocking filters? Have they ever communicated with strangers online? Have they ever shared their personal information (such as home address, phone number, name of their school, places they like to go) on the Internet with somebody they don't know personally? Have they ever accepted a friend request on the Internet from somebody they don't know? Have they ever told their passwords to anybody else, except parents? Have they ever been talked about cyber bullying before, the dangers associated with it and how to deal with the cyber bullying?

Social guardianship can be seen as staying in the room while a child is using the computer, monitoring a child's online activity, presence of network administrators or other online bystanders. Social guardianship was measured by asking parents, where at home is the child allowed to use her/his electronic communication devices? Do they check messages and call log on their child's mobile phone? Do they supervise their child's Internet use at home (stay in the same room) while the child is on the Internet? Do they check browser history on child's different electronic communication devices? Do they check their child's activity on her/his social network accounts?

3.6.1.4 Background variables – gender, age, nationality.

To measure background variables, children were asked to specify their gender (1 equated female and 2 equated male). Children were also asked to specify their age. According to children's answers 5 separate measures were created, where 1 equated 9 years old, 2 equated 10 years old, 3 equated 11 years old, 4 equated 12 years old and 5 equated 13 years old. Parents were asked to specify the nationality of the

mother, father and child. From parent's answers, 3 separate measures were created where 1 equated Irish, 2 equated non-Irish and 3 equated mixed nationality.

3.6.2 Dependent variables

'Dependent variables are those that depend on the independent variable; they are the outcomes or results of the influence of the independent variables' (Creswell, 2014, p. 52). Because traditional bullying has been recognised as being correlated with cyber bullying (Kowalski, Morgan & Limber, 2012), victimisation was measured by asking children have they ever been bullied? Children were asked have they ever been cyber bullied through phone calls, text messages, instant messages, emails, social network websites, chat rooms or in any other way?

3.7   Ethical Considerations

Ethical issues in research arise and require attention prior to conducting the study, at the beginning of the study, when collecting data, when analysing data and when reporting, sharing and storing data (Creswell, 2014, p. 92). Therefore, ethical considerations are compulsory when undertaking any form of research and researchers are those individuals who are responsible and have to ensure the integrity of the research process (O'Leary, 2004, p. 50). The requirement in the DIT is that the research has to be conducted in line with DIT Research Ethics Principles and the Ethics Principles of British Society of Criminology. In addition, to conduct the study, ethics approval was required, sought and received from the Head of School from DIT in Grangegorman.

The present study, which involved young children (9-13 year olds), required special attention. Because of their young age and immaturity, they had difficulties in defending themselves and therefore they were in need and entitled for special protection. Therefore, by seeking answers from them for some sensitive questions, extra attention was needed to ensure and protect the rights, interests, dignity and

welcome of these young research participants. In addition to that, the following points were carefully considered:

3.7.1 Harm and Benefits

Researchers 'have a responsibility to minimise personal harm to research participants' (British Society of Criminology, 2015, p. 5). This requirement needs special attention and implementation, especially when research involves children. Does this research actually need to be done? Do the possible benefits justify any potential harm caused by this research?

Considering the lack of current research on cyber bullying at the primary school level, we have to bear in mind that without the children's perspectives it will never be properly understood by the people who need to understand it, such as parents, educators and academic representatives, law enforcement, health and counselling services.

3.7.2 Informed Consent

Because the research participants were recruited via the school, an informational letter, samples of the student consent form, the student survey, the parental consent form and the parental survey were sent to the principals of a schools in Central Dublin who were willing to cooperate in the study. An information letter explained what the research was about, why children and their parents were needed to take part of it, for what use the information received was going and how it would be reported.

In order to participate in the study, children and their parents/guardians had to sign consent forms (World Medical Association, 2013, para 28, 29). They were informed that their participation in the survey was voluntary, that they may refuse to participate, refuse to answer any of the questions and both the child and the parent/guardian could withdraw from the survey at any stage of the research process (World Medical Association, 2013, para 25). Even if the parent/guardian had signed

the consent form, allowing child to participate, the child's participation in the survey was still voluntary.

3.7.3 Privacy and Confidentiality

A researcher has a duty to protect the privacy and confidentiality of research subjects (World Medical Association, 2013, para 24). Any received data from research participants needs special care and protection at all stages of research (Ali & Kelly, 2012). From the beginning both children and their parents were made aware that it was their decision about how much information they wished to share and reveal. They were made aware, that if they so wished, they could choose not to answer any of the questions. Any answers provided/information given in the survey would be confidential. All information would be only used for this study, only for educational purposes and only reported in terms of group findings. No information would be reported that would allow anyone to be identified individually. The responses would not be linked back to any child's or parent's/guardian's name. Names and consent forms would be kept separate from the other information provided. Children and their parents/guardians were made aware that the majority of what was said during the research is confidential. However, if at any of the answers indicate that a child is being hurt, or the child intends to hurt her or himself or somebody else, I would be required to contact the proper authorities.

3.7.4 Acknowledgement and appreciation

As with every research project, participants in this study were acknowledged for their contributions. All children were invited to take part in a competition, where they had an opportunity to express their own thoughts and feelings about bullying and cyber bullying in the form of short essay, a poem or a drawing. The best thoughts, ideas and suggestions in every class were rewarded in the form of cinema tickets and local Leisureplex Gift Cards to show them my appreciation.

3.8 Conclusion

This chapter gave an overview of the research methodology that was used in this study. Accordingly, the research objectives were outlined. Research design, data sample, procedure and measures derived from Routine Activity Theory, were explained. Because of the participants young age, a great emphasis was placed on ethical considerations. Received data was analysed by using cross-tabulation, an ANOVA and a Mann-Whitney U Test, which will be elaborated further in the Findings chapter as will the findings derived from Routine Activity Theory.

CHAPTER FOUR
Findings

4.1 Introduction

This chapter sums up the data received through the surveys. Received quantitative data, which was gathered from students and parents through home-based surveys was analysed by using the IBM SPSS Statistics Data Editor Version 24. To achieve the aims of the study, cross-tabulation between variables, an ANOVA and a Mann-Whitney U Test were used to analyse the data and explore can Routine Activity Theory be used to explain cyber bullying victimisation.

According to the school student's enrolment numbers, 81 research envelopes were handed out to the girls school and 80 research envelopes were handed out to the boys school. In total 86 envelopes were returned, which gave overall response rate of 53.42%. The 4th class, in both the girls and boys schools, had the best response rate, girls 71.88% ($n = 23$) and boys 78.26% ($n = 18$) accordingly. The 5th class girl's response rate was 25% ($n = 7$), which was the lowest and the 5th class boy's response rate was 61.54% ($n = 16$). The 6th class girl's response rate was 52.38% ($n = 11$) and the 6th class boy's response rate was 53.42% ($n = 11$). 5 entries were discarded because of either missing Consent Forms from student or parent/guardian, missing Student or Parent Surveys and in one instance there was a suspicion that parent had filled in both surveys. Therefore 81 surveys from students and 81 surveys from parents have been used to analyse the findings.

4.2 Participant's background

46.9% ($n = 39$) of the children in this study were girls and 51.9% ($n = 42$) were boys. Girls ages ranged between 9-12 years and boys between 9-13 years. The children's overall mean age in this study was 10.73. 46.9% ($n = 38$) of the children were from 4th class, 25.9% ($n = 21$) were from the 5th class and 27.2% ($n = 22$) were from the 6th class.

According to the parents' reports, there were 25 different nationalities represented in this study. In 43.2% ($n = 35$) of the families both parents were Irish, 40.7% ($n = 33$) of the families both parents were Non-Irish and 14.8% ($n = 12$) of the families were mixed, which means that one of the the parents was Irish and another one Non-Irish. This provided a reasonably representative mix and provided an opportunity to compare does living in a different country influence children's access to different electronic communication devices and the Internet, their online activity, supervision, traditional bullying and cyber bullying victimisation.

4.3   Using Routine Activity Theory to explain Cyber bullying victimisation

According to Cohen and Felson's (1979) Routine Activity Theory (RAT), a criminogenic event occurs when three factors convergence in space and time: a motivated offender (1) who comes into contact with a suitable target (2) in the absence of a capable guardian (3). Therefore, victimisation is explained by targets suitability and accessibility to a motivated offender in the absenteeism of capable guardian. According to the theory, the capable guardian is most important factor to reduce victimisation. With small variations, all these RAT elements are adaptable and present in online environment.

To determine, whether RAT can be used to explain cyber bullying victimisation due to children's availability and suitability to motivated cyber bullying perpetrators and presence or absence of physical, personal and social guardianship in this study, children and their parents were asked multiple questions about their activities regarding the usage of Internet and different electronic communication devices, their computer, technology and Internet knowledge, supervision and cyber bullying experiences.   Following children's availability to motivated offenders, their suitability, capable guardianship and background variables will be discussed in detail to determine whether Routine Activity Theory is adaptable to explain cyber bullying victimisation?

4.3.1 Exposure to motivated offender / target availability to motivated offender

Research shows, that the more time children spend on the Internet, the prevalence of cyber bullying victimisation increases and by engaging more frequently in certain activities, they are more available to motivated offenders (Kowalski & Limber, 2008; Mishna et al., 2012; Wolak, Mitchell & Finkelhor, 2007). Therefore, a target's availability to a motivated offender was measured by assessing children's level of Internet usage per day. Also by looking how frequently they engage in various activities such as talking on a mobile phone, sending text messages, sending instant messages, gaming online, watching videos on the Internet, browsing the Internet, using chat rooms and checking their social network accounts.

An ANOVA was conducted to compare the effects of how many hours per day children spend on the Internet on cyber bullying victimisation in none, 1-2 hours, 3-4 hours, and 5-6 hours conditions. In addition, the Mann-Whitney U Test was used to measure did the nature and frequency of children's activities have an effect on cyber bullying victimisation.

An ANOVA revealed no significant effect of children's time spent online per day on cyber bullying victimisation at the $p<.05$ level for the four conditions [$F(3, 74) = 0.292$, $p = 0.831$]. Therefore, spending more time online did not play a role in cyber bullying victimisation in this study. Because variables were not normally distributed and when running ANOVA, Test of Homogeneity of Variances was violated ($p < 0.05$), the Mann-Whitney U Test was chosen to compare the frequency of children's different activities and cyber bullying victimisation. According to the Mann-Whitney U Test, the nature and frequency of children's certain activities, such as talking on a mobile phone ($p = 0.032$), sending text messages ($p = 0.002$), sending instant messages ($p = 0.007$), using chat rooms ($p = 0.029$) and checking social network account ($p = 0.003$) are making them more available to motivated offenders and play a significant role in cyber bullying victimisation. Therefore, by engaging more frequently using a direct form of communication, such as talking on a mobile phone, sending text messages, sending instant messages, using chat rooms and checking social network accounts, increases significantly children's availability to motivated offenders and increases cyber bullying victimisation. The frequency of activities

such as gaming online (p = 0.053), watching videos on the Internet (p = 0.365) and browsing the Internet (p = 0.586) did not increase the risk of cyber bullying victimisation.

4.3.2   Target suitability / accessibility

Target suitability/accessibility is making it easier for the cyber bullying perpetrator to come into contact with their target. Considering Ybarra and Mitchell (2004) statement, that cyber bullying aggressors/victims are generally heavy Internet users, digital suitability/accessibility was measured by asking children questions about their online activities that indicate their attractiveness as suitable target to a motivated offender. Children were asked do they have access to the Internet at home all the time? What is their favourite activity while on the Internet? Until what time they are allowed to use their electronic communication devices during the week and at the weekend? Do they use mobile phone, tablet, laptop, PC and gaming consoles to communicate with their friends? And do they use Snapchat, WhatsApp, Facebook, Instagram, Viber, Skype, Musical.ly and Twitter to keep contact with their friends?

An ANOVA was conducted to compare the effect of children's "all the time" Internet access at home on cyber bullying victimisation in yes and no conditions. 79% (n = 64) of the children, including 4 cyber bullying victims, reported having access to the Internet at home "all the time". Regardless an ANOVA found no significant effect of children's "all the time" Internet access at home on cyber bullying victimisation at the $p<.05$ level for the two conditions [$F_{(1,76)}$ = 0.010, p = 0.921]. Consequently, having all the time Internet access at home did not influence cyber bullying victimisation.

In addition to that, a Mann-Whitney U Test showed as well no significant effect of "until what time" children are allowed to use their electronic communication devices during the week (p = 0.273) and at the weekend (p = 0.346). Therefore, having access to the Internet until late at night had no significant effect on cyber bullying victimisation either.

Following all electronic communication devices, such as mobile phone, tablet, laptop, PC, PlayStation, Xbox and Wii, were included in the Mann-Whitney U Test to assess, if any of them have an effect on cyber bullying victimisation. Only the use of Xbox (p = 0.013) and Wii (p = 0.006) were found to have a significant effect on cyber bullying victimisation. Therefore, Xbox and Wii are generating significant level of suitability/accessibility to motivated offender to come together with suitable target in time and space, which significantly affects cyber bullying victimisation.

Next, different social network environments, such as Snapchat, WhatsApp, Facebook, Instagram, Viber, Skype, Musical.ly and Twitter were included in the Mann-Whitney U Test to assess if any of them were associated with cyber bullying victimisation. Instagram (p = 0.005) and Skype (p = 0.001) had significant effect on cyber bullying victimisation. Therefore, victims of cyber bullying were more likely to use social network environments such as Instagram and Skype. These were generating a significant level of suitability/accessibility for a motivated offender to come in contact with a suitable target, which significantly benefited cyber bullying victimisation.

4.3.3   Capable guardianship

In a terrestrial environment bystanders can play an important role as capable guardians. However, in an online environment capable guardianship comes in other forms, such as physical, personal and social.

4.3.3.1 Physical guardianship.

Physical guardianship in an online environment is seen as different computer software, anti-virus software, firewall programs, parental controls and use of filtering systems (Ngo & Paternoster, 2011). To measure physical guardianship in this study and whether it is associated with cyber bullying victimisation, parents were asked are there any blocking filters and parental control filters used on different electronic communication devices that their child is using.

Unfortunately using blocking filters and parental control filters on children's different electronic communication devices is not very common among parents. According to parents reports 59.3% (n = 48) of children had a mobile phone, but only 40.4% (n = 19) used blocking filters and 48.9% (n = 23) used parental control filters on their child's mobile phone. 60.5% (n = 49) of children had a tablet, but only 51% (n = 25) used blocking filters and 55.1% (n = 27) used parental control filters on their child's tablet. 35.8% (n = 29) of children had a laptop, but only 37.9% (n = 11) used blocking filters and 37.9% (n = 11) used parental control filters on their child's laptop. 6.2% (n = 5) of children had a PC, but only 40% (n = 2) used blocking filters and 60% (n = 3) used parental control filters on their child's PC. 25.9% (n = 21) of children had a PlayStation, but only 23.8% (n = 5) used blocking filters and 33.3% (n = 7) used parental control filters on their child's PlayStation. 28.4% (n = 23) of children had Xbox, but only 52.2% (n = 12) used blocking filters and 56.5% (n = 13) used parental control filters on their child's Xbox. And 22.2% (n = 18) of children had a Wii, but only 50% (n = 9) used blocking filters and 50% (n = 9) used parental control filters on their child's Wii.

Accordingly, a Mann-Whitney U Test showed that not using blocking filters on child's Xbox (p = 0.004) and Wii (p = 0.009) had a significant effect on cyber bullying victimisation and not using parental control filters on child's Xbox (p = 0.006) and Wii (p = 0.009) also had a significant effect on cyber bullying victimisation. Therefore, to make children less accessible to motivated offenders and to avoid cyber bullying victimisation, parents can take protective measures by installing blocking filters and parental control filters on child's different electronic communication devices, especially on gaming consoles.

4.3.3.2 Personal guardianship.

Personal guardianship was measured by asking children questions from children about their technical knowledge, computer skills and awareness of online risks.

An ANOVA was conducted to compare the effect of the level of children's computer, technology and Internet knowledge on cyber bullying victimisation in

"good" and "not so good" conditions; of having a conversation with parents about Internet usage safety on cyber bullying victimisation in yes and no conditions; of knowing how to override parental control filters on cyber bullying victimisation in yes and no conditions and of knowing how to override blocking filters on cyber bullying victimisation in yes and no conditions; of revealing a password to anybody else except parent on cyber bullying victimisation in yes and no conditions; of being talked about cyber bullying before, the dangers associated with it and how to deal with cyber bullying on cyber bullying victimisation in yes and no conditions.

80.2% (n = 65) of children reported their computer, technology and Internet knowledge as good. According to ANOVA, there was no significant effect of the level of children's computer, technology and Internet knowledge on cyber bullying victimisation at the p<.05 level for the two conditions [F (1, 74) = 0.031, p = 0.861].

As 76.5% (n = 62) of children reported of having a conversation with parents about Internet usage safety, ANOVA found no significant effect of having a conversation with parents about Internet usage safety on cyber bullying victimisation at the p<.05 level for the two conditions [F (1, 75) = 0.013, p = 0,909].

However, 16% (n = 13) of children reported knowing how to override parental controls and blocking filters ANOVA found no significant effect of knowing how to override parental control filters on cyber bullying victimisation at the p<.05 level for the two conditions [F (1, 76) = 0.150, p = 0.700] and of knowing how to override blocking filters on cyber bullying victimisation at the p<.05 level for the two conditions [F (1, 76) = 0.150, p = 0.700].

ANOVA did also not find a significant effect of revealing a password to anybody else except a parent on cyber bullying victimisation at the p<.05 level for the two conditions [F (1, 76) = 0.436, p = 0.511], however 8.6% (n = 7) of children had revealed their password to somebody else.

According to the children's replies 95.1% (n = 3) of parents had talked about cyber bullying before, the dangers associated with it and how to deal with it, including all 6.2% (n = 5) cyber bullying victims. Nonetheless ANOVA found no significant

effect of having talked about cyber bullying before, the dangers associated with it and how to deal with cyber bullying on cyber bullying victimisation at the p<.05 level for the two conditions [F (1, 76) = 0.209, p = 0.649].

18.5% (*n* = 15) of children reported communicating with strangers online previously, 4.9% (*n* = 4) reported sharing personal information with a stranger and 18.5% (*n* = 15) reported accepting a friend request from a stranger. A Mann-Whitney U Test was conducted to determine whether these activities had an effect on cyber bullying victimisation. In general, children's technical knowledge, computer skills and awareness of online risks should reduce their accessibility to motivated offenders and benefit them overall. However, according to the results, even when accepting friend request from strangers (p = 0.244) and by communicating with strangers online (p = 0.244) did not have an effect on cyber bullying victimisation in this study. Analyses indicated that only when children shared personal information on the Internet with somebody they did not know, had a significant effect (p = 0.019) on cyber bullying victimisation.

4.3.3.3 Social guardianship.

Social guardianship in this study is seen as staying in the room while child is using her/his electronic communication devices and monitoring child's online activity. An ANOVA was conducted to compare the relationship of whether parents checking messages and call registers on their child's mobile phone on cyber bullying victimisation in yes and no conditions and relationship between parent supervising their child's Internet use at home by staying in the same room while child is on the Internet on cyber bullying victimisation in yes and no conditions.

83.3% (*n* = 40) of parents, whose child had a mobile, reported checking their child's messages and call logs on the phone and 65.4% (*n* = 53) reported supervising their child's Internet use. ANOVA found no significant effect between parents checking messages and call register on their child's mobile phone and cyber bullying victimisation at the p<.05 level for the two conditions [F (1,59) = 0.712, p = 0.402]. There was also no significant effect found between parent supervising their child's

Internet use at home by staying in the same room while child is on the Internet and the cyber bullying victimisation at the p<.05 level for the three conditions [F (1, 75) = 0.135, p = 0.714].

A Mann-Whitney U Test was conducted to determine whether using different electronic communication devices in a common area or one's own room had an effect of cyber bullying victimisation. According to parents reports 65.4% (n = 53) of them supervised their child's Internet use, however 48.1% (25) of children were allowed to use their mobile phone, 42.9% (n = 24) were allowed to use their tablet, 31% (n = 13) were allowed to use their laptop, 26.1% (n = 6) were allowed to use their PlayStation, 40.7% (n = 11) were allowed to use their Xbox and 31.6% (n = 6) were allowed to use their Wii in their own room. Considering that four out of five cyber bullying victims had Xbox and Wii, of which two out of four were allowed to use them in their own room, a Mann-Whitney U Test reported that having Xbox (n = 0.035) and Wii (n = 0.008) and using them in their own room, have a significant effect on cyber bullying victimisation.

A Mann-Whitney U Test was also conducted to determine whether checking the browser history on child's different electronic communication devices and checking child's activity on her/his social network accounts had an effect on cyber bullying victimisation. In total, 69.1% (n = 56) of parents reported checking browser history on child's electronic communication devices and 86.3% (n = 44) of parents, whose child had a social network account (63%, n= 51), checked their activity on these social network accounts. According to a Mann-Whitney U Test, whether parents checked browser history on child's different electronic communication devices (p = 0.160), checked child's activity on her/his social network accounts (p = 0.074) or not, had no effect of children's cyber bullying victimisation.

4.3.4 Children's gender and Cyber bullying victimisation

In this study boys were more confident on their Internet knowledge and abilities than girls. 92.9% (n = 39) of boys reported their computer, technology and Internet knowledge as "Good", whereas this figure among girls was 70.3% (n = 26). In

addition, parents gave more freedom for boys to use their different electronic communication devices in their own room. In general, 61.9% (n = 26) of boys and 48.7% (n = 19) of girls who owned any electronic communication devices were allowed to use at least one of their devices in their own room.

Using different electronic communication devices to keep contact with friends was more versatile among boys than girls. Regardless that 64.1% (n = 25) of girls and 56.1% (n = 23) of boys reported using mobile to keep contact with their friends, 53.7% (n = 22) of boys and 13.2% (n = 5) of girls used gaming consoles, 41.5% (n = 17) of boys and 26.3% (n = 10) of girls used laptop and 36.6% (n = 15) of boys and 26.3% (n = 10) of girls used tablet to keep contact with their friends.

Previous research has shown gender differences in cyber bullying victimisation (Hoff & Mitchell, 2009; Kowalski, Morgan & Limber, 2012; Walrave & Heirman, 2011). According to children's reports 6.4% (n = 5) of them have been victims of cyber bullying. 7.9% (n = 3) of girls were cyber bullied whereas 5.0% (n = 2) of boys were cyber bullied. To determine does gender influence cyber bullying victimisation in this study, an ANOVA was conducted to compare the effect of children's gender on cyber bullying victimisation in female and male conditions. There was no significant effect found of gender on cyber bullying victimisation at the p<.05 level for the two conditions [F (1,76) = 0.266, p = 0.607].

4.3.5   Children's age and Cyber bullying victimisation

There has not much research done on cyber bullying victimisation at a primary school level. In addition, the age of cyber bullying victimisation among adolescents varies as well (European Parliament, 2016; Navarro, 2016; Ybarra & Mitchell, 2004). In this study three cyber bullying victims were 10 years old, one was 11 years old and one was 12 years old. Therefore, to determine if children's age influence cyber bullying victimisation in primary school level, an ANOVA was conducted to compare the effect of children's age on cyber bullying victimisation in 9 years, 10 years, 11 years, 12 years and 13 years conditions. There was no significant effect of

children's age on cyber bullying victimisation at the p<.05 level for the five conditions [$F_{(4, 73)} = 0.249$, p = 0.909].

4.3.6   Children's nationality and Cyber bullying victimisation

Thus far research on cyber bullying has not paid much attention to children's nationality within the same study. Because 35 families in this study identified themselves as Irish, 33 identified themselves as non-Irish and 12 identified as mixed, it seemed to be reasonable to investigate, does nationality influence cyber bullying victimisation? According to the results, two cyber bullying victims were from Irish nationality and three were from non-Irish. Therefore, an ANOVA was conducted to compare the effect of nationality on cyber bullying victimisation in Irish, non-Irish and mixed conditions. There was no significant effect found of nationality on cyber bullying victimisation at the p<.05 level for the three conditions [$F_{(2, 74)} = 0.527$, p = 0.592].

4.3.7   Traditional Bullying and Cyber bullying victimisation

According to research, there is a link between traditional face-to-face bullying and cyber bullying in a sense that victims of traditional bullying frequently become victims of cyber bullying (Kowalski, Morgan & Limber, 2012) because face-to-face interactions are unintentionally carried over into cyber environment (Espelage, Rao & Craven, 2013). To determine if traditional face-to-face bullying is correlated with cyber bullying at the primary school level or does being a victim of traditional bullying influence becoming a victim of cyber bullying, children were asked if they had ever been bullied.

According to the children's responses 48.7% (*n* = 19) of girls and 29.3% (*n* = 12) of boys; 44.7% (*n* = 17) of 3rd class children, 23.8% (*n* = 5) of 4th class children and 42.9% (*n* = 9) of 6th class children had been victims of bullying. In total 38.3% (*n* = 31) of the children in this study have been victims of bullying, including three of the cyber bullying victims.

Therefore, a Mann-Whitney U Test was conducted to check the correlation between traditional bullying and cyber bullying, according to which traditional bullying victimisation had no significant effect of cyber bullying victimisation (p = 0.286). Therefore, being a victim of traditional bullying had nothing to do with becoming a victim of cyber bullying in this study.

4.4   Conclusion

This chapter represented data collected and findings derived from Routine Activity Theory. These included exposure to motivated offender / target availability to motivated offender, target suitability / accessibility and capable guardianship whether physical, personal or social. Considering the children's availability, accessibility and guardianship, analysis revealed that there is a link and Routine Activity Theory can be used to explain cyber bullying victimisation. However, some elements were more applicable than others, they all played a role in cyber bullying victimisation, which will be also discussed in the following chapter.

CHAPTER FIVE
Discussion

According to research, young people who spend more time on the Internet are at a greater risk of becoming victims of cyber bullying (Kowalski et al., 2008). As analysis in this study showed, the amount of time children spent on the Internet did not increase their odds for cyber bullying victimisation. However, the activities they engaged while in the Internet influenced their victimisation. By engaging more frequently on specific activities, on direct forms communication, such as talking on a mobile phone, sending text messages, sending instant messages, using chat rooms and checking social network accounts, significantly increased their availability to motivated offenders and increased cyber bullying victimisation.

In addition to this, research indicates, that having privileged online access increases the chances of coming into contact with cyber bullying behaviour (Walrave & Heirman, 2011). As reported in the previous chapter, analysis showed that having "all the time" Internet access at home and being able to use different electronic communication devices during the week and at the weekend until late at night had no significant effect on cyber bullying victimisation. However, it was surprising to discover that using gaming consoles, such as Xbox and Wii to communicate with friends, had a significant effect on cyber bullying victimisation. They generated significant level of suitability/accessibility to a motivated offender to come together with suitable target in time and space, which significantly affected cyber bullying victimisation. In addition to that, when using social network environments such as Instagram and Skype, generated significant level of suitability/accessibility to a motivated offender and significantly benefited cyber bullying victimisation.

Guardianship in Routine Activity Theory is considered being the most important factor on reducing victimisation. However, guardianship in online environment comes in other forms, such as physical, personal and social. According to this, parents can take protective measures. Parents can reduce the risk of cyber bullying victimisation among children by installing blocking filters and parental control filters on children's different electronic communication devices, by improving children's technical knowledge, computer skills and their awareness of online risks, and by

supervising and monitoring the children's electronic communication devices and their online activity. There were many variables created to measure physical, personal and social guardianship. However, as reported previously, most of them did not have any significant effect on cyber bullying victimisation. Despite that, each different guardianship had one variable, which had significant effect on cyber bullying victimisation. Analysis indicated that not using parental control filters and blocking filters on children's gaming consoles, such as Xbox and Wii, had a significant effect on cyber bullying victimisation (lack of physical guardianship). By allowing children to use their gaming consoles, such as Xbox and Wii, in their own room had a significant effect on cyber bullying victimisation (lack of social guardianship). Also children sharing their personal information on the Internet with somebody they don't know had a significant effect on cyber bullying victimisation (lack of personal guardianship).

However previous research (Smith et al., 2008) has shown gender and age difference in cyber bullying victimisation, analysis in this study on gender and age had no significant effect on cyber bullying victimisation. Both girls and boys at every age had an equal chance of becoming a victim of cyber bullying. Perhaps, this was due to by children's young age, because 97.5% ($n = 79$) of the children were 12 years old or younger but according to European Parliament (2016) study, 13-15 year olds are most exposed to cyber bullying and according to Ortega et al. (2009) cyber bullying victimisation peaks around the age of 14. However, three out of five cyber bullying victims were from non-Irish families, analysis on nationality reported no significant effect on cyber bullying victimisation. This might be due to the fact that only 43.8% ($n = 35$) of the children were from Irish families and majority, 55.6% ($n = 45$), were from non-Irish or mixed families. Therefore, children from different nationalities had an equal chance of becoming a victim of cyber bullying.

Research also refers to a link between traditional face-to-face bullying and cyber bullying in a sense that victims of traditional bullying frequently become victims of cyber bullying (Kowalski, Morgan & Limber, 2012) because face-to-face interactions are unintentionally carried over into cyber environment (Espelage, Rao & Craven, 2013). According to the analysis in this study, being a victim of bullying did not contribute becoming a victim of cyber bullying. However, 38.8% ($n = 31$) of

children in this study reported being victims of bullying, including 3 of the cyber bullying victims, children who had been bullied and children who had not been bullied had an equal chance becoming victims of cyber bullying.

CHAPTER SIX
Conclusions and Limitations

6.1   Conclusions

It must be recognised, that the children in this study were heavily influenced by technology. According to their parent's reports, 91.4% (n = 74) of the children owned at least one electronic communication device such as mobile phone, tablet, laptop, PC, PlayStation, Xbox or Wii and 73.8% (n = 59) had access to the Internet at home at all times. Therefore, it is no surprise that regardless of the small representative sample 6.4% (n = 5) of the children have become victims of cyber bullying. Considering their young age, this is quite remarkable figure! It is also important to know that according to reports from parents, the mean age of first mobile phone ownership was 7.8 years at the 4th class level, in 5th class it was 9.2 years and in 6th class it was 9.7 years. Whereas, for gaming consoles which have Internet access, the mean age was even lower. For the 4th class level it was 6.9 years, for the 5th class it was 8.1 years and for the 6th class it was 8.5 years.

This study was looking to find out, if Routine Activity Theory (RAT) could be used to predict but also to be used to prevent cyber bullying victimisation. Therefore, children's exposure to motivated offenders / their availability to motivated offender, children's suitability / accessibility and guardianship (physical, personal and social) were taken into consideration. Analysis showed that even though some RAT elements had a low number of significant variables, each one of them had a role to play in cyber bullying victimisation. Therefore, RAT can be used to predict cyber bullying victimisation and also used when trying to prevent it. Accordingly, parents can take protective measures to reduce the risk of cyber bullying victimisation among children. By installing blocking filters and parental control filters on children's different electronic communication devices, by improving children's technical knowledge, computer skills and their awareness of online risks, and by supervising and monitoring the children's electronic communication devices and their online activity.

Traditional bullying, cyber bullying or any form of peer aggression is not just part of growing up and it must be taken seriously. Negative experiences with traditional bullying and cyber bullying victimisation and perpetration, which are particular to childhood and adolescent behaviours/activities, contribute to the development of different mental health problems (McMahon, Reulbach, Keeley, Perry & Arensman, 2010). Of course! How can one succeed when feeling threatened, powerless, scared and/or angry all the time?

According to Mishna et al. (2012), two factors that contribute to cyber bullying are increasing access to and the use of technology and decreasing face-to-face interactions. Considering how much time young people spend online and considering their access to different electronic communication devices. Considering that more often they prefer to interact with their peers through different electronic and communication devices rather than face-to-face. Considering that technology keeps developing rapidly and new media to carry out cyber bullying arises, means that more research, awareness and education are required.

More education is required, because according to research, education is a key component to combat cyber bullying (Hinduja & Patchni, 2011; Wong-Lo & Bullock, 2011). However, education should not only engage children but also their parents, school officials and other educators who work with young people. Hoff and Mitchell (2009) also recommend starting Internet awareness training and teaching ethical online behaviour to children at a younger age. We have to keep in mind, however that although technology training is important, it is not enough. Therefore, extra training for children is required on subjects such as dealing with social tensions; handling peer interactions, break-ups, rejection and jealousy and becoming more accepting towards others.

More research is required, because we have to keep in mind that without children's perspectives cyber bullying will never be properly understood by parents, school officials, law enforcement, health and counselling services. In order to provide adequate help for victims, they need to understand this new cyber based phenomenon. Accordingly, I hope that this research will provide contemporary insight and useful information, into what is going on in young primary aged

children's lives regarding cyber bullying victimisation. Providing a sense of how vulnerable they are due to their young age, due to their exposure to different electronic communication devices and the online environment and the lack of surveillance from their parents. Hopefully this research helps to understand how vulnerable young primary aged children are to cyber bullying victimisation and inspires everybody to remain vigilant in the effort to promote a safe terrestrial and online environment, that all our children need and deserve.

6.2   Limitations

Every study has its limitations, as does this one. Because there were only two schools participating in this study, which provide only small representative data set ($n = 81$), the findings can not be applied/generalised to a larger population of young people. Due to their young age, this study only focused on how access to different electronic communication devices and Internet, supervision, children's technical knowledge, computer skills and awareness affected their experiences with cyber bullying victimisation. However further studies are required to explore victims more in-depth involvement in cyber bullying. Because of the decision to conduct surveys at home under the supervision of parent/guardian in order to avoid any chance of possible further victimisation, there was a danger that children's answers would be influenced by parents. For example, in one instances a child's surveys had to be dropped, because there was a suspicion that parent had filled in both surveys.

There is a need for more research of cyber bullying among primary school students, but the representative sample should be larger and from different regions of Ireland, because it would improve the generalisability of study findings. There is also a risk that children and parents misunderstood questions or idea of the questions, because the majority of the research on cyber bullying, including this one, has been carried out by using quantitative methods. Therefore, more qualitative research is required in order to better understand cyber bullying victimisation among primary school students and its impact on them. In order to find out their personal views on cyber bullying, we have to give them a chance and opportunity to express their

understanding, their experiences and their thoughts about the topic while using their own words and not optional answers.

REFERENCES

Ali, S. & Kelly, M. (2012). Ethics and social research. In C. Seale (Ed.), *Researching society and culture* (pp. 58-76). Los Angeles: Sage Publication Ltd.

Arntfield, M. (2015). Toward a Cybervictimology: Cyberbullying, Routine Activity Theory, and the Anti-Sociality of Social Media. *Canadian Journal of Communication*, 40(3), 371-388.

Arseneault, L., Bowes, L. & Shakoor, S. (2010). Bullying victimization in youths and mental health problems: 'Much ado about nothing'? *Psychological Medicine*, 40(5), 717-729.

Barnicoat, C. A. (2014). *Perceptions of cyberbully victimization among college students: an examination using routine activity theory* (Master of Arts in Sociology Thesis). Middle Tennessee State University, Tennessee.

Belsey, B. (2005). Cyberbullying: An Emerging Threat to the "Always On" Generation. Retrieved February 2, 2017, from https://pdfs.semanticscholar.org/d4b9/5d4ad8599e86cd726290f4e4a5d8309f6bda.pdf

British Society of Criminology. (2015). *Statement of Ethics for Researchers 2015.* Retrieved May 17, 2017, from http://www.britsoccrim.org/documents/BSCEthics2015.pdf

Central Statistics Office, Ireland. (2017). *Census 2016 Summary Results – Part 1.* Retrieved June 6, 2017, from http://www.cso.ie/en/media/csoie/newsevents/documents/census2016summaryresultspart1/Census2016SummaryPart1.pdf

Cohen, L. E. & Felson, M. (1979). Social Change and Crime Rate Trends: A Routine Activity Approach. *American Sociological Review*, 44(8), 588-608.

Crawford, A. & Evans, K. (2012). Crime Prevention and Community Safety. In M. Maguire, R. Morgan & R. Reiner (Eds.), *The Oxford Handbook of Criminology* (5th ed.) (pp. 769-805). United Kingdom: Oxford University Press.

Creswell, J. W. (2014). *Research Design: qualitative, quantitative and mixed methods approaches* (4th ed.). Los Angeles: Sage Publications Inc.

Dale, A. (2006). Quality Issues with Survey Research. *International Journal of Social Research Methodology*, 9(2), 143-158.

De Leeuw, E., Borgers, N. & Smits, A. (2004). Pretesting Questionnaires for Children and Adolescents. In S. Presser, J. M. Rothgeb, M. P. Couper, J. T. Lessler,

Dennehy, R. (2016, October). Cyberbullying in Young People: Behaviour, Experiences, Resolutions. Workshop materials presented at the ACJRD 19th Annual Conference in Cyber Crime, Dublin, IRL.

Department of Education and Skills, Ireland. (2013). *Anti-Bullying Procedures for Primary and Post-Primary Schools.* Dublin: Department of Education and Skills.

Espelage, D. L., Rao, M. A. & Craven, R. G. (2013). Theories of Cyberbullying. In S. Bauman, D. Cross & J. Walker (Eds.), *Principles of cyberbullying research: definitions, measures, and methodology* (pp. 49-67). New York: Routledge.

Etikan, I., Musa, S. A. & Alkassim, R. S. (2015). Comparison of Convenience Sampling and Purposive Sampling. *American Journal of Theoretical and Applied Statistics*, 5(1), 1-4.

European Parliament. (2016). *Cyberbullying among young people.* Retrieved January 11, 2017, from http://www.europarl.europa.eu/RegData/etudes/STUD/2016/571367/IPOL_STU(2016)571367_EN.pdf

Fitzgerald, C. (2017, May 10). TD warns mobile phones give children access to 'unlimited pornography of every type'. *TheJournal.ie.* Retrieved May 24, 2017, from http://www.thejournal.ie/ban-children-mobile-phones-3381404-May2017/

Henson, B., Wilcox, P., Reyns, B. W. & Cullen, F. T. (2010). Gender, Adolescent Lifestyles, and Violent Victimization: Implications for Routine Activity Theory. *Victims & Offenders*, 5(4), 303-328.

Hinduja, S. & Patchin, J. W. (2010). Bullying, Cyberbullying, and Suicide. *Archives of Suicide Research*, 14, 206-221.

Hinduja, S. & Patchin, J. W. (2011). Overview of Cyberbullying. *In White House Conference on Bullying Prevention in March 10, 2011.* Washington, United States. Retrieved October 9th, 2016, from https://people.uwec.edu/patchinj/cyberbullying/white_house_conference_materials_Hinduja&Patchin.pdf

Hinduja, S. & Patchin, J. W. (2012). Cyberbullying: Neither an epidemic nor a rarity. *European Journal of Developmental Psychology*, 9(5), 539-543.

Hoff, D. L. & Mitchell, S. N. (2009). Cyberbullying: causes, effects, and remedies. *Journal of Educational Administration*, 47(5), 652-665.

Hutzell, K. L. (2014). *The Impact of Interpersonal Bullying and Cyberbullying on School Avoidance* (Published doctoral dissertation). George Mason University, Virginia.

Kelly, M. (2012). Chapter 7: Research questions and proposals. In C. Seale (Ed.), *Researching society and culture* (pp. 97-118). Los Angeles: Sage Publication Ltd.

Kigerl, A. (2012). Routine Activity Theory and the Determinants of High Cybercrime Countries. *Social Science Computer Review*, 30(4), 470-486.

Kitchenham, B. & Pfleeger, S. L. (2002). Principles of Survey Research. Part 5: Populations and Samples. *Software Engineering Notes*, 27(5), 17-20.

Kowalski, R. M. & Limber, S. P. (2012). Psychological, Physical, and Academic Correlates of Cyberbullying and Traditional Bullying. *Journal of Adolescent Health*, 53(1), 13-20.

Kowalski, R. M., Morgan, C. A. & Limber, S. P. (2012). Traditional bullying as a potential warning sign of cyberbullying. *School Psychology International*, 33(5), 505-519.

Leukfeldt, E. R. & Yar, M. (2016). Applying Routine Activity Theory to Cybercrime: A Theoretical and Empirical Analysis. *Deviant Behavior*, 37(3), 263-280.

McMahon, E., Reulbach, U., Keeley, H., Perry, I. J. & Arensman, E. (2010). Bullying victimisation, self harm and associated factors in Irish adolescent boys. *Social Science & Medicine*, 71, 1300-1307.

Menesini, E. (2012). Cyberbullying: The right value of the phenomenon. Comments on the paper "Cyberbullying: An overrated phenomenon?" *European Journal of Developmental Psychology*, 9(5), 544-552.

Mishna, F., Khoury-Kassabri, M., Gadalla, T. & Daciuk, J. (2012). Risk factors for involvement in cyber bullying: Victims, bullies and bully-victims. *Children and Youth Services Review*, 34(1), 63-70.

Nansel, T. R., Overpeck, M., Pilla, R. S., June Ruan, W., Simons-Morton, B. & Scheidt, P. (2001). Bullying Behaviors Among US Youth. Prevalence and Association With Psychosocial Adjustment. *JAMA*, 285(16), 2094-2100.

Navarro, R. (2016). Gender Issues and Cyberbullying in Children and Adolescents: From Gender Differences to Gender Identity Measures. In R. Navarro, S. Yubero & E. Larrañaga (Eds.), *Cyberbullying Across the Globe* (pp. 35-61). Switzerland: Springer International Publishing.

Navarro, J. N. & Jasinski, J. L. (2012). Going Cyber: Using Routine Activities Theory to Predict Cyberbullying Experiences. *Sociological Spectrum*, 32(1), 81-94.

Ngo, F. T. & Paternoster, R. (2011). Cybercrime Victimization: An examination of Individual and Situational level factors. *International Journal of Cyber Criminology*, 5(1), 773-793.

O'Brien, M. & Yar, M. (2008). *Criminology: the key concepts.* London: Routledge.

O'Leary, Z. (2004). *The essential guide to doing research.* London: Sage Publications Ltd.

Olweus, D. (1997). Bully/victim problems in school: Facts and intervention. *European Journal of Psychology of Education,* 12(4), 495-510.

Olweus, D. (2012). Cyberbullying: An overrated phenomenon? *European Journal of Developmental Psychology*, *9*(5), 520-538.

O'Moore, M. (2014). *Understanding Cyberbullying. A Guide for Parents and Teachers.* Dublin: Veritas.

O'Neill, B. & Dinh, T. (2013). Cyberbullying among 9-16 year olds in Ireland. Digital Childhoods Working Paper Series (No.5). Dublin: Dublin Institute of Technology. Retrieved 20 October, 2016, from
http://arrow.dit.ie/cgi/viewcontent.cgi?article=1031&context=cserrep

O'Neill, B. & Dinh, T. (2015). Net Children Go Mobile: Full Findings from Ireland. Dublin: Dublin Institute of Technology. Retrieved July 15, 2017, from
http://arrow.dit.ie/cgi/viewcontent.cgi?article=1055&context=cserrep

Ortega, R., Elipe, P., Mora-Merchán, J. A., Calmaestra, J. & Vega, E. (2009). The Emotional Impact on Victims of Traditional Bullying and Cyberbullying. A Study of Spanish Adolescents. *Journal of Psychology*, 217(4), 197-204.

Ortega, R., Elipe, P., Mora-Merchán, J. A., Luisa Genta, M., Brighi, A., Guarini, A., Smith, P. K., Thompson, F. & Tippett. N. (2012). The Emotional Impact of Bullying and Cyberbullying on Victims: A European Cross-National Study. *Aggressive Behavior*, 38(5), 342-356.

Patchin, J. W. & Hinduja, S. (2006). Bullies Move Beyond the Schoolyard. A Preliminary Look at Cyberbullying. *Youth Violence and Juvenile Justice*, 4(2), 148-169.

Safaria, T. (2016). Prevalence and Impact of Cyberbullying in a Sample of Indonesian Junior High School Students. *The Turkish Online Journal of Educational Technology*, 15(1), 82-89.

Sengupta, A. & Chaudhuri, A. (2011). Are social networking sites a source of online harassment for teens? Evidence from survey data. *Children and Youth Services Review*, 33(2), 284-290.

Siegel, L. J. (2011). *Criminology* (11th ed.). Wadsworth: Cengage Learning.

Smith, P. K. (2012). Cyberbullying: Challenges and opportunities for a research program – A response to Olweus (2012). *European Journal of Developmental Psychology*, *9*(5), 553-558.

Smith, P. K., del Barrio, C. & Tokunaga, R. (2013). Definition of Bullying and Cyberbullying: How Useful Are the Terms? In S. Bauman, D. Cross & J, Walker (Eds.), *Principles of cyberbullying research: definition, measures and methodology* (pp. 26-40). New York: Routledge.

Smith, P. K., Mahdavi, J., Carvalho, M., Fisher, S., Russell, S. and Tippett, N. (2008). Cyberbullying: its nature and impact in secondary school pupils. *Journal of Child Psychology and Psychiatry,* 49(4), 376-385.

Van Teijlingen, E. R. & Hundley, V. (2001). The importance of pilot studies. [Electronic version] *Social research UPDATE,* Volume 5. Retrieved June 1, 2017, from http://aura.abdn.ac.uk/bitstream/handle/2164/157/SRU35%20pilot%20studies.pdf?sequence=1&isAllowed=y

Walrave, M. & Heirman, W. (2011). Cyberbullying: Predicting Victimisation and Perpetration. *Children & Society,* 25, 59-72.

White, P. (2009). *Developing research questions: a guide for social scientists.* China: Palgrave Macmillan.

Wolak, J., Mitchell, K. J. & Finkelhor, D. (2007). Does Online Harassment Constitute Bullying? An Exploration of Online Harassment by Known Peers and Online-Only Contacts. *Journal of Adolescent Health*, 41, 51-58.

Wong-Lo, M., & Bullock, L. M. (2011). Digital Aggression: Cyberworld Meets School Bullies. *Preventing School Failure: Alternative Education for Children and Youth*, 55(2), 64-70.

World Medical Association. (2013). *WMA Declaration of Helsinki – Ethical Principles for Medical Research Involving Human Subjects.* Retrieved May 24, 2017, from https://www.wma.net/policies-post/wma-declaration-of-helsinki-ethical-principles-for-medical-research-involving-human-subjects/

Yar, M. (2005). The Novelty of 'Cybercrime': An Assessment in Light of Routine Activity Theory. *European Journal of Criminology*, 2(4), 407-427.

Ybarra, M. L. & Mitchell, K. J. (2004). Online aggressor/targets, aggressors, and targets: a comparison of associated youth characteristics. *Journal of Child Psychology and Psychiatry*, 45(7), 1308-1316.

APPENDICES

Appendix 1

Letter to School Principal

Department/School: School of Languages, Law and Social Science, Dublin Institute of Technology, Grangegorman, Dublin 7
Researcher Name: Eret Haava
Contact Details: d14129002@mydit.ie
Name of Research Supervisor: Paddy Dolan
Contact Details: paddy.dolan@dit.ie

Name of Study: *"Cyber bullying among Irish primary school pupils."*

Dear _____,

I am currently doing my dissertation to complete my Masters Degree in Criminology at Dublin Institute of Technology. In order to do this I am doing a research study, under supervision, on cyber bullying to benefit our children and parents like myself. Research ethics approval to carry out this study has been granted by Dr. Kevin Lalor, Head of School of Languages, Law and Social Sciences.

Technology keeps developing and changing nowadays with frantic speed, which in turn affects the nature, forms, means and tactics of cyber bullying. Therefore, there is a need for more research on cyber bullying, especially at the primary school level. This is because there hasn't been much research done on cyber bullying at the primary school level. In addition, children are using different information and communication technology at rapidly increasing rates and they start to use this technology at a younger age. Therefore present research is looking a contemporary insight into the vulnerability of young people to cyber bullying victimisation due to their age, their exposure and access to different electronic communication devices, to their parents knowledge about their children's actual Internet activity as well as the kind of access children have to different electronic communication devices and how well children are supervised while engaged with their different electronic communication devices while online. Furthermore, the study is looking for answers about young people's experience with bullying and cyber bullying.

In order to participate in this study, I need both children and their parents to sign the Consent Forms. Participation in the survey is voluntary and both the child and the parent may withdraw at any time. They may refuse to participate, refuse to answer any of the questions, or withdraw from the study at any time. Even if the parent has signed the Consent Form, allowing child to participate, the child's participation in the study is voluntary.

Any answers provided / information given in the survey will be confidential. The information will be only used for this study. The responses will not be linked back to any child's/parent's name. Names on Consent Forms will be kept separate from the other information provided. The information collected in the survey will be used for educational purposes and it will only be reported in terms of group findings. No information will be reported that would allow anyone to be identified individually. However, if any of the answers indicate that a child is being hurt, or that the child intends to hurt herself/himself or somebody else, I am required to contact the proper authorities.

I would very much value student's and their parents' participation in this study, because without the knowledge about what is actually going on with young people's lives regarding cyber bullying and how exposed they have become to it because of vast technological development, availability and accessibility, it will never be properly understood by the people who need to understand it, such as parents, educators and academic representatives, law enforcement, health and counselling services.

Please find enclosed examples of the Information for Participants, a Letter to Parents, a Parental Consent Form, a Student Consent Form, a Parent Survey and a Student Survey. If you have any further queries regarding the research, please do not hesitate to contact me. Should you agree to accept this invitation for school students and their parents to participate in the study, please sign the consent form and return it to me.

Kind regards,

_____

Eret Haava

Thank you for your participation and assistance!

Appendix 2

Information for Participants

Department/School: School of Languages, Law and Social Science, Dublin Institute of Technology, Grangegorman, Dublin 7
Researcher Name: Eret Haava
Contact Details: d14129002@mydit.ie
Name of Research Supervisor: Paddy Dolan
Contact Details: paddy.dolan@dit.ie

Name of Study: *"Cyber bullying among Irish primary school pupils."*

My name is Eret Haava and I am currently doing my dissertation to complete my Masters Degree in Criminology at Dublin Institute of Technology. In order to do this I am doing a research study, under supervision, on cyber bullying to benefit our children and parents like myself. For this I have outlined some information below for you. Research ethics approval to carry out this study has been granted by Dr. Kevin Lalor, Head of School of Languages, Law and Social Sciences.

Children have used physical, verbal and psychological bullying to hurt, intimidate and harass each other for generations. This latest generation however with the help of technology have brought bullying to a new level where the reach and the extent of the harm caused by it can be endless. This new technology orientated phenomenon, cyber bullying, has become a social problem, which may be associated with depression, anxiety, psychosomatic problems, academic problems, poor relationship, substance abuse, self-harm and suicidal ideas. According to Cyber Safe Ireland Annual Report, which was published in 2016, it affects 20% of young people in Ireland.

It is very important to address the cyber bullying problem, especially at the primary school level. This is because there hasn't been much research done on cyber bullying at this level due to its sensitive nature. But we have to keep in mind that this is the age when children are becoming more vulnerable to cyber bullying victimisation. This is the turning point, when they are starting to get more freedom to explore the Internet without constant adult supervision. However their young age and emotional immaturity will not be able to protect them from the hidden threats the Internet and social media can have. Online negative experiences in their early years can have a profound negative impact on their later social, emotional and cognitive development.

Without the children's perspectives bullying and cyber bullying will never be properly understood by the people who need to understand it, such as parents, educators and academic representatives, law enforcement, health and counselling services. Therefore, by conducting this study, I am hoping to gain useful information and contemporary insight into what is going on in young people's lives regarding cyber bullying, a sense of if they are vulnerable due to their young age, their exposure to different electronic communication devices, to the Internet, or because of parents lack of knowledge and surveillance. I am interested in finding out about

children's accessibility to different electronic communication devices and how much time they spend using them. Whether they are and how well they are monitored/supervised while online. I am interested in finding out the level of parents knowledge of their children's Internet activity as well as the kind of access children have to different electronic communication devices, how much time they allow them to spend online, which environment their children use and how well they are supervised. The survey will also touch on young people's experiences with cyber bullying.

Many cyber bullying researchers acknowledge that education is a key component for prevention and intervention in regarding to cyber bullying. Therefore, I would also like to conduct a short essay competition for children where they will have an opportunity to express their thoughts and feelings about cyber bullying and bullying. This opportunity will hopefully make them research the topic more in depth and help them become more aware, careful and thoughtful in their daily routine activities while online. The best essays from each class will be acknowledged and rewarded.

In order to participate, I need both children and their parents to sign the Consent Forms. Participation in the survey is voluntary and both the child and the parent may withdraw at any time. They may refuse to participate, refuse to answer any of the questions, or withdraw from the study at any time. Even if the parent has signed the Consent Form, allowing child to participate, the child's participation in the survey is voluntary.

Any answers provided / information given in the survey will be confidential. The information will be only used for this study. The responses will not be linked back to any child's/parent's name. Names on Consent Forms will be kept separate from the other information provided. The information collected in the survey will be used for educational purposes and it will only be reported in terms of group findings. No information will be reported that would allow anyone to be identified individually. However if any of the answers indicate that a child is being hurt, or that the child intends to hurt herself/himself or somebody else, I am required to contact the proper authorities.

Hopefully this survey will make all participants more aware of the serious nature of cyber bullying, how vulnerable children can be to it, how important parental supervision and mediation is to the prevention and reduction of it and I hope it will inspire everybody to remain vigilant in their efforts to promote the safe environment that all our children need and deserve.

Signed: _____

     Eret Haava

Thank you for your participation and assistance!

Appendix 3

Letter to Parents

Department/School: School of Languages, Law and Social Science, Dublin Institute of Technology, Grangegorman, Dublin 7
Researcher Name: Eret Haava
Contact Details: d14129002@mydit.ie
Name of Research Supervisor: Paddy Dolan
Contact Details: paddy.dolan@dit.ie

Name of Study: *"Cyber bullying among Irish primary school pupils."*

Dear Parents/Guardians,

I am currently doing my dissertation to complete my Masters Degree in Criminology at Dublin Institute of Technology. In order to do this I am doing a research study, under supervision, on cyber bullying to benefit our children and parents like myself. Research ethics approval to carry out this study has been granted by Dr. Kevin Lalor, Head of School of Languages, Law and Social Sciences.

Technology keeps developing and changing nowadays with frantic speed, which in turn affects the nature, forms, means and tactics of cyber bullying. Therefore there is a need for more research on cyber bullying, especially at the primary school level. This is because there hasn't been much research done on cyber bullying at the primary school level. In addition, children are using different information and communication technology at rapidly increasing rates and they start to use this technology at a younger age. Therefore present research is looking a contemporary insight into the vulnerability of young people to cyber bullying victimisation due to their age, their exposure and access to different electronic communication devices, to their parents knowledge about their children's actual Internet activity as well as the kind of access children have to different electronic communication devices and how well children are supervised while engaged with their different electronic communication devices while online. Furthermore, the study is looking for answers about young people's experience with bullying and cyber bullying.

In order to participate in this study, I need you and your child to sign the Consent Form. Participation in the survey is voluntary and both, yourself and your child may withdraw at any time. You may refuse to participate, refuse to answer any of the questions, or withdraw from the study at any time. Even if you have signed the Consent Form, allowing your child to participate, the child's participation in the study is voluntary.

Any answers provided / information given in the survey will be confidential. The information will be only used for this study. The responses will not be linked back to any child's/parent's name. Names on Consent Forms will be kept separate from the other information provided. The information collected in the survey will be used for

educational purposes and it will only be reported in terms of group findings. No information will be reported that would allow anyone to be identified individually. However, if any of the answers indicate that a child is being hurt, or that the child intends to hurt herself/himself or somebody else, I am required to contact the proper authorities.

I would very much value your and your child's participation in this study, because without this knowledge about what is actually going on with young people's lives regarding cyber bullying and how exposed they have become to it because of vast technological development, availability and accessibility, it will never be properly understood by the people who need to understand it, such as parents, educators and academic representatives, law enforcement, health and counselling services.

Please find enclosed an Information Letter to Participants. If you have any further queries regarding the research, please do not hesitate to contact me. Should you agree to accept this invitation, please sign Parent Consent Form, fill in Parents Survey, make sure your child signs Student Consent Forms and fills in Student Survey. Make sure to place all required documents (Parental Consent Form, Parents Survey, Student Consent Forms, Student Survey) to an empty envelope provided and ask your child to return it to her/his teacher.

Kind regards,

Eret Haava

Thank you for your participation and assistance!

Appendix 4

Student Survey

Department/School: School of Languages, Law and Social Science, Dublin Institute of Technology, Grangegorman, Dublin 7
Researcher Name: Eret Haava
Contact Details: d14129002@mydit.ie
Name of Research Supervisor: Paddy Dolan
Contact Details: paddy.dolan@dit.ie

Name of Study: *"Cyber bullying among Irish primary school pupils."*

What is bullying?
Bullying is when someone is picked on or treated unfairly by other people. It is bullying when the other people mean to hurt, and they keep doing it and you feel that you cannot stop them. It is not bullying when young people of about the same age and power have the odd fight or quarrel.

What is cyber bullying?
Cyber bullying is when someone is mean using computers, cell phones, and other electronic communication devices to keep annoying, or threatening or making someone feel bad. For example, making mean phone calls, sending or posting harmful or cruel text messages, messages, emails, pictures and videos, spreading rumours online. Cyber bullying might occur at home through your Internet account or a mobile phone used at home. Cyber bullying can also happen at school through the school's Internet network or a mobile phone used at school.

Electronic communication devices
Electronic communication devices in this study are mobile phone, tablet, laptop, PC and gaming consoles, such as PlayStation, Xbox, Wii. You can use them to talk to your friends on the Internet.

You will need about 10 minutes to finish the survey. Keep in mind that your part in this survey is voluntary and you may stop at any time. Your answers will be only used for this study. They will be kept confidential and will not be shared. However, if any of the answers indicate that a child is being hurt, or that you intend to hurt yourself or somebody else, I am required to contact the proper authorities. There are no right or wrong answers, so I am asking you to be completely honest when answering the questions.

Instructions: Do not write your name on this sheet.

1. What class are you in? o 4th class   o 5th class   o 6th class

2. How old are you? …… years old

3. Do you have a mobile phone?
  o Yes
  o No

4. Are you allowed to take your mobile phone to school? (Fill in only one answer.)
  o Yes
  o No
  o I don't have a mobile phone

5. Do you use your mobile phone while in school? (Fill in only one answer.)
  o Yes
  o No
  o I don't have a mobile phone

6. Do your classmates use their mobile phones while in school?
  o Yes
  o No

7. Have you ever had a conversation with your parents about Internet usage safety?
  o Yes
  o No

8. How would you rate your computer, technology and Internet knowledge?
  o Good
  o Not so good

9. Do you have access to the Internet at home all the time?
  o Yes
  o No

10. How many hours per day you spend on the Internet? (If none write in NONE, other than that write in ONE, TWO, THREE, FOUR, FIVE and so on.)
…………………………………………..hours

11. Name your most favourite activity while you are on the Internet. Such as watch videos on the Internet, game online, talk with friends, use chat rooms and other (please write).
…………………………………………………..

12. Name your most favourite website on the Internet.
…………………………………………………..

13. Name your most favourite App.
…………………………………………………..

14. In a normal day, how many times do you (If none write in NONE, other than that write in ONE, TWO, THREE, FOUR, FIVE and so on.)

Talk on a mobile phone ………………………………… times
Send text messages ………………………………… times
Send instant messages ………………………………… times
Game online ………………………………… times
Watch videos on the Internet ………………………………… times
Browse the Internet ………………………………… times
Use chat rooms ………………………………… times
Check your social network account ………………………………… times

15. Do you use mobile phone, tablet, laptop, PC, PlayStation, Xbox, Wii to talk to your friends? (Fill in all that apply to you.)

	Yes	**No**
Mobile phone	o	o
Tablet	o	o
Laptop	o	o
PC	o	o
PlayStation	o	o
Xbox	o	o
Wii	o	o

Name any other electronic communication devices to talk to your friends online ……
…………………………………………………………………………………………

16. Do you use Snapchat, WhatsApp, Facebook, Instagram, Viber, Skype, Musical.ly and Twitter to keep contact to your friends? (Fill in all that apply to you.)

	Yes	**No**
Snapchat	o	o
WhatsApp	o	o
Facebook	o	o
Instagram	o	o
Viber	o	o
Skype	o	o
Musical.ly	o	o
Twitter	o	o

Name any other social network websites to keep contact to your friends ……………
…………………………………………………………………………………………

17. Do your parents know you have an account to these social network sites?
(Fill in only one answer.)
- o All of them
- o Some of them
- o No
- o I have no account on any social network sites

18. Do your parents check your activity on these social network sites?
- o Yes
- o No

69

19. Have you ever communicated with strangers online?
- o Yes
- o No

20. Have you ever accepted a friend request on the Internet from somebody you don't know?
- o Yes
- o No

21. Except your parents, have you ever told your passwords to anybody else?
- o Yes
- o No

22. Have you ever shared your personal information (such as home address, phone number, name of your school, places you like to go) **on the Internet with somebody you don't know personally?**
- o Yes
- o No

23. Do your different electronic communication devices have blocking filters put in place? (Fill in only one answer.)
- o Yes
- o No
- o I don't know
- o I have never heard about blocking filters

24. Do your different electronic communication devices have parental controls put in place? (Fill in only one answer.)
- o Yes
- o No
- o I don't know
- o I have never heard about parental controls

25. Do you know how to override blocking filters?
- o Yes
- o No

26. Do you know how to override parental controls?
- o Yes
- o No

27. Does your school have guidelines or rules regarding how to handle bullying and cyber bullying? (Look at the first page to see what bullying and cyber bullying is.)
- o Yes
- o No

28. Have you ever been talked to about bullying before, the dangers associated with it and how to deal with the bullying? (Look at the first page to see what bullying is.)
- o Yes
- o No

29. Have you ever been bullied?
- o Yes
- o No

30. Have any of your friends or schoolmates been bullied?
- o Yes
- o No

31. Have you ever been talked to about cyber bullying before, the dangers associated with it and how to deal with the cyber bullying? (Look at the first page to see what cyber bullying is.)
- o Yes
- o No

32. Have you ever been cyber bullied in any of these ways (Fill in all that apply to you.)?

	Yes	**No**
o Phone calls	o	o
o Text messages	o	o
o Instant messages	o	o
o Emails	o	o
o Social network websites	o	o
o Chat rooms	o	o

Name any other ways you've been cyber bullied ……………………………..
…………………………………………………………………………………
…………………………………………………………………………………

33. Have any of your friends or schoolmates been cyber bullied?
- o Yes
- o No

34. What time do you go to bed during the week? (Fill in only one answer.)
- o Before 8.30pm
- o Around 8.30pm
- o Around 9pm
- o Around 9.30pm
- o Around 10pm
- o Around 10.30pm
- o Around 11pm
- o After 11pm

35. What time do you go to bed at the weekend? (Fill in only one answer.)
- o Before 8.30pm
- o Around 8.30pm
- o Around 9pm
- o Around 9.30pm
- o Around 10pm
- o Around 10.30pm
- o Around 11pm
- o After 11pm

36. Until what time do you use your electronic communication devices during the week? (Fill in only one answer.)
- o I am not allowed to use electronic communication devices during the week
- o Until 6pm
- o Until 7pm
- o Until 8pm
- o Until 9pm
- o Until 10pm
- o Later than 10pm

37. Until what time do you use your electronic communication devices at the weekend? (Fill in only one answer.)
- o I am not allowed to use electronic communication devices at the weekend
- o Until 6pm
- o Until 7pm
- o Until 8pm
- o Until 9pm
- o Until 10pm
- o Later than 10pm

Thank you for completing this survey!

Appendix 5

Parent Survey

Department/School: School of Languages, Law and Social Science, Dublin Institute of Technology, Grangegorman, Dublin 7
Researcher Name: Eret Haava
Contact Details: d14129002@mydit.ie
Name of Research Supervisor: Paddy Dolan
Contact Details: paddy.dolan@dit.ie

Name of Study: *"Cyber bullying among Irish primary school pupils."*

What is bullying?
A student is being bullied or victimised when she or he is exposed, repeatedly and over time, to negative actions on the part of one or more other students/people.

What is cyber bullying?
Cyber bullying is willful and repeated harm inflicted through the use of computers, cell phones, and other electronic communication devices.

Electronic communication devices
Electronic communication devices in this study are considered to include a mobile phone, tablet, laptop, PC and gaming consoles, such as PlayStation, Xbox, Wii, which can be connected to the Internet and used to communicate with other people online.

You will need approximately 10 minutes to complete the survey. Keep in mind that your participation in this survey is voluntary and you may withdraw at any time. Your answers will be only used for this study. They will be kept confidential and will not be shared. However if any of the answers indicate that a child is being hurt, or that you intend to hurt yourself or somebody else, I am required to contact the proper authorities. There are no right or wrong answers, so I am asking you to be completely honest when answering the questions.

Instructions: Do not write your name on this sheet. While your child is filling in her/his survey, please do not influence your child's answers or check them afterwards.

1. What is your relationship with the child?
- o   Mother
- o   Father
- o   Other (specify please) ……………………………………………………

2. How old are you?   ……. years old

3. What is child's, child's mother and child's father nationality?

	Child	Mother	Father
Irish	o	o	o
Non-Irish	o	o	o
Specify please	………………	………………	…………………

4. How many people live in the household? List all with their ages.
- o   Mother …….
- o   Father …….
- o   Children   ……. Boys ……………….. years old
                          ……. Girls ………………... years old
- o   Grandmother …….
- o   Grandfather …….
- o   Childminder …….
- o   Other (specify please) ……………………………………………………………
- o   All together ……. people live in the household.

5. How many different electronic communication devices are in the household?
- ……. Mobile phones
- ……. Tablets
- ……. Laptops
- ……. PCs
- ……. Gaming consoles (PlayStation, Xbox, Wii)

6. Does the child have her/his own

	Yes	No
Mobile phone	o	o
Tablet	o	o
Laptop	o	o
PC	o	o
PlayStation	o	o
Xbox	o	o
Wii	o	o

7. How old was the child when she/he got her/his first

Mobile phone	…….
Tablet	…….
Laptop	……
PC	…….
PlayStation	…….
Xbox	…….
Wii	……..

8. At home where is the child allowed to use her/his

	Common Areas	Own Room
Mobile phone	o	o
Tablet	o	o
Laptop	o	o
PC	o	o
PlayStation	o	o
Xbox	o	o
Wii	o	o

9. Are there any blocking filters used on different electronic communication devices your child is using?

	Yes	No
Mobile phone	o	o
Tablet	o	o
Laptop	o	o
PC	o	o
PlayStation	o	o
Xbox	o	o
Wii	o	o

10. Are there any parental controls used on different electronic communication devices your child is using?

	Yes	No
Mobile phone	o	o
Tablet	o	o
Laptop	o	o
PC	o	o
PlayStation	o	o
Xbox	o	o
Wii	o	o

11. Does your child know how to override blocking filters/parental controls?
(Fill in only one answer.)
- o Yes
- o No
- o I don't know
- o I suspect she/he does know how to override parental controls

12. Does your child's school have guidelines or rules regarding the use of different electronics communication devices during school hours?
- o Yes
- o No

13. Is your child allowed to take her/his mobile phone to school? (Fill in only one answer.)
- o Yes
- o No
- o She/he doesn't have a mobile phone

14. Do you check messages and calls registered on your child's mobile phone?
- o Yes
- o No

15. Does your child have access to the Internet at home all the time?
- o Yes
- o No

16. How many hours per day does your child spend on the Internet? (If none, write in NONE.)
………. hours

17. In a normal day, how many times does your child (If none, write in 0)

Talk on a mobile phone ……. times
Send text messages ……. times
Send instant messages ……. times
Game online ……. times
Watch videos on the Internet ……. times
Browse the Internet ……. times
Use chat rooms ……. times
Check his social network account ……. times

18. How would you rate your child's computer, technology and Internet knowledge?
- o Good
- o Not so good

19. Have you ever had a conversation with your child about Internet usage safety?
- o Yes
- o No

20. Do you supervise your child's Internet use at home (stay in the same room while the child in on the Internet)**?**
- o Yes
- o No

21. Do you check the browser history on your child's different electronic communication devices?
- o Yes
- o No

22. Does your child have a social network account (Such as Snapchat, WhatsApp, Facebook, Instagram, Viber, Skype, Musical.ly, Twitter)**?**
- o Yes
- o No

23. Do you check your child's activity on her/his social network account?
- o Yes
- o No

24. Name your child's most favorite activity on the Internet (such as watch videos on the Internet, game online, talk with friends, use chat rooms and so on)**.**

………………………………………………………………………………………….

25. Name your child's most favorite website.

………………………………………………………………………………………….

26. Name your child's most favorite App.

………………………………………………………………………………………….

27. Does your child's school have guidelines or rules regarding how to handle bullying and cyber bullying?
- o Yes
- o No

28. Are you familiar with your child's school guidelines or rules regarding how to handle bullying and cyber bullying?
- o Yes
- o No

29. Have you ever spoken with your child about bullying, the dangers associated with it and how to deal with the bullying?
- o Yes
- o No

30. Has your child ever spoken about being bullied?
- o Yes
- o No

31. Has your child ever spoken about witnessing bullying?
- o Yes
- o No

32. Have you ever spoken with your child about cyber bullying, the dangers associated with it and how to deal with the cyber bullying?
- o Yes
- o No

33. Has your child ever spoken about being cyber bullied?
- o Yes
- o No

34. Has your child ever spoken about witnessing cyber bullying?
- o Yes
- o No

35. What time does your child go to bed during the week? (Fill in only one answer.)
- o Before 8.30pm
- o Around 8.30pm
- o Around 9pm
- o Around 9.30pm
- o Around 10pm
- o Around 10.30pm
- o Around 11pm
- o After 11pm

36. What time does your child go to bed at the weekend? (Fill in only one answer.)
- o Before 8.30pm
- o Around 8.30pm
- o Around 9pm
- o Around 9.30pm
- o Around 10pm
- o Around 10.30pm
- o Around 11pm
- o After 11pm

37. Until what time is your child allowed to use her/his electronic communication devices during the week? (Fill in only one answer.)
- o She/he is not allowed to use electronic communication devices during the week
- o Until 6pm
- o Until 7pm
- o Until 8pm
- o Until 9pm
- o Until 10pm
- o Later than 10pm

38. Until what time is your child allowed to use her/his electronic communication devices at the weekend? (Fill in only one answer.)
- o She/he is not allowed to use electronic communication devices at the weekend
- o Until 6pm
- o Until 7pm
- o Until 8pm
- o Until 9pm
- o Until 10pm
- o Later than 10pm

Thank you for your time and assistance!

Appendix 6

Principal Consent Form

Department/School: School of Languages, Law and Social Science, Dublin Institute of Technology, Grangegorman, Dublin 7
Researcher Name: Eret Haava
Contact Details: d14129002@mydit.ie
Name of Research Supervisor: Paddy Dolan
Contact Details: paddy.dolan@dit.ie

Name of Study: *"Cyber bullying among Irish primary school pupils."*

I have read and understand the following documents: Letter to School Principal, Information for Participants, Letter to Parents, Parental Consent Form, Student Consent Form, Parent Survey and Student Survey. I understand the nature of the study. All my questions have been answered to my satisfaction and I agree that school's students and their parents participate in this study.

I understand that the information collected in this survey will be treated in strict confidence and will be used for research purposes only.

……………………………………….   …………………………………………
Your name (block letters)   Signature

……………………………………………..
Date

Appendix 7

Parental Consent Form

Department/School: School of Languages, Law and Social Science, Dublin Institute of Technology, Grangegorman, Dublin 7
Researcher Name: Eret Haava
Contact Details: d14129002@mydit.ie
Name of Research Supervisor: Paddy Dolan
Contact Details: paddy.dolan@dit.ie

Name of Study: *"Cyber bullying among Irish primary school pupils."*

Dear parents/guardians, if your child has any questions about the study, please explain it to him in the way you think is most appropriate and ask her/him then to fill in Student Consent Form and Student Survey.

I have read the Letter to Parents and Information for Participants, I understand the nature of the study and I agree that my daughter/son can participate. All my questions have been answered to my satisfaction and I agree to take part in it.

I understand that the information collected in this survey will be treated with strict confidence and will be used for research purposes only.

…………………………..   ……………………………………..
Your Name (block letters)   Full name of student (block letters)

………………………………   ……………………………………….
Signature of parent/guardian   Date

Appendix 8

Student Consent Form

Department/School: School of Languages, Law and Social Science, Dublin Institute of Technology, Grangegorman, Dublin 7
Researcher Name: Eret Haava
Contact Details: d14129002@mydit.ie
Name of Research Supervisor: Paddy Dolan
Contact Details: paddy.dolan@dit.ie

Name of Study: *"Cyber bullying among Irish primary school pupils."*

I understand that this survey will ask me questions about my experiences and the way I use electronic communication devices. My answers will not have my name on them and I know that I do not have to answer if I do not want to.

I have had the study explained to me and I agree to take part in it. I understand what I need to do.

I understand that the information collected in this survey will be treated in strict confidence and will be used for research purposes only.

……………………………………….   ……………………………………
Your name (BLOCK LETTERS)   Signature

……………………………………..
Date