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Using YouTube as an Informal Learning Tool for Children

by

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June 2018

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Abstract

This research discusses how children aged 11 to 13 years benefit from using YouTube as an informal learning tool. The study was conducted using a qualitative descriptive survey research and 22 learners divided into four focus groups from a primary school in Centurion, Gauteng Province, South Africa were interviewed. The researcher adopted Social Cognitive Theory as an underlying theoretical framework for the study. The theoretical framework highlights that a triadic reciprocal causation between environment (home environment, school environment), cognitive factors (self-efficacy, self-regulation, reinforcements, outcome expectations and observational learning) and behavioural factors (informal learning) plays a crucial role on how children learn on YouTube. The data collected from the focus group interviews was analysed using thematic analysis. The findings of the research contribute to literature by highlighting vast incidental and self-directed informal learning benefits experienced by children using YouTube. The study acknowledges that there are possibilities of children being exposed to inappropriate content when using of social media; however, it was concluded that instead of prohibiting children from using social media platforms, they should be empowered with skills that will allow them to play a first line defence in ensuring their safety online.

Keywords: *Informal Learning, Social Media, Incidental Learning, Self-directed Learning, Children, YouTube, Inappropriate Content*

Acknowledgements

As I get to the end of my research project, reflecting on the 18-month journey, a quotation from John Donne's Devotions (1624) came to mind*: "No man is an Island, entire of itself; every man is a piece of the Continent, a part of the main."* Completing this project would have been a daunting task had it not been for the support and guidance that I received and that I will forever cherish.

First, glory, honour, and praise to the Lord Almighty, the God who created the heavens and the earth, the God who created me. I owe my entire existence and success to Him.

I would also like to thank my family for their support and guidance. My husband - Makaya: Thank you for the support, understanding and the many sacrifices you made in picking up some balls that I might have dropped along the way while I was busy with the project. To my two sons, Mihlali and Mihle: Thank you boys, I would not have been able to do this without you. Your patience and understanding meant so much to me. I hope I have inspired you to be the best that you can be in whatever you touch with your hands as if you were working for the Lord.

"A man that hath friends must shew himself friendly: and there is a friend that sticketh closer than a brother" (Proverbs 18: 24, King James Version). This goes out to all my friends – you have taken friendship to a completely new level. I am truly blessed to have all of you in my life. Thank you for supporting me in this journey.

I would also like to thank my employer: You believed in me and supported me in completing this project. Furthermore, my sincere thanks to my colleagues; I really appreciated your support in this journey.

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Finally yet importantly, I would like to extend my gratitude to my supervisor, Marie Hattingh. Completing this project would not have been possible without your time, guidance, support and the passion you have for the research topic.

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1 CHAPTER 1: INTRODUCTION TO THE RESEARCH

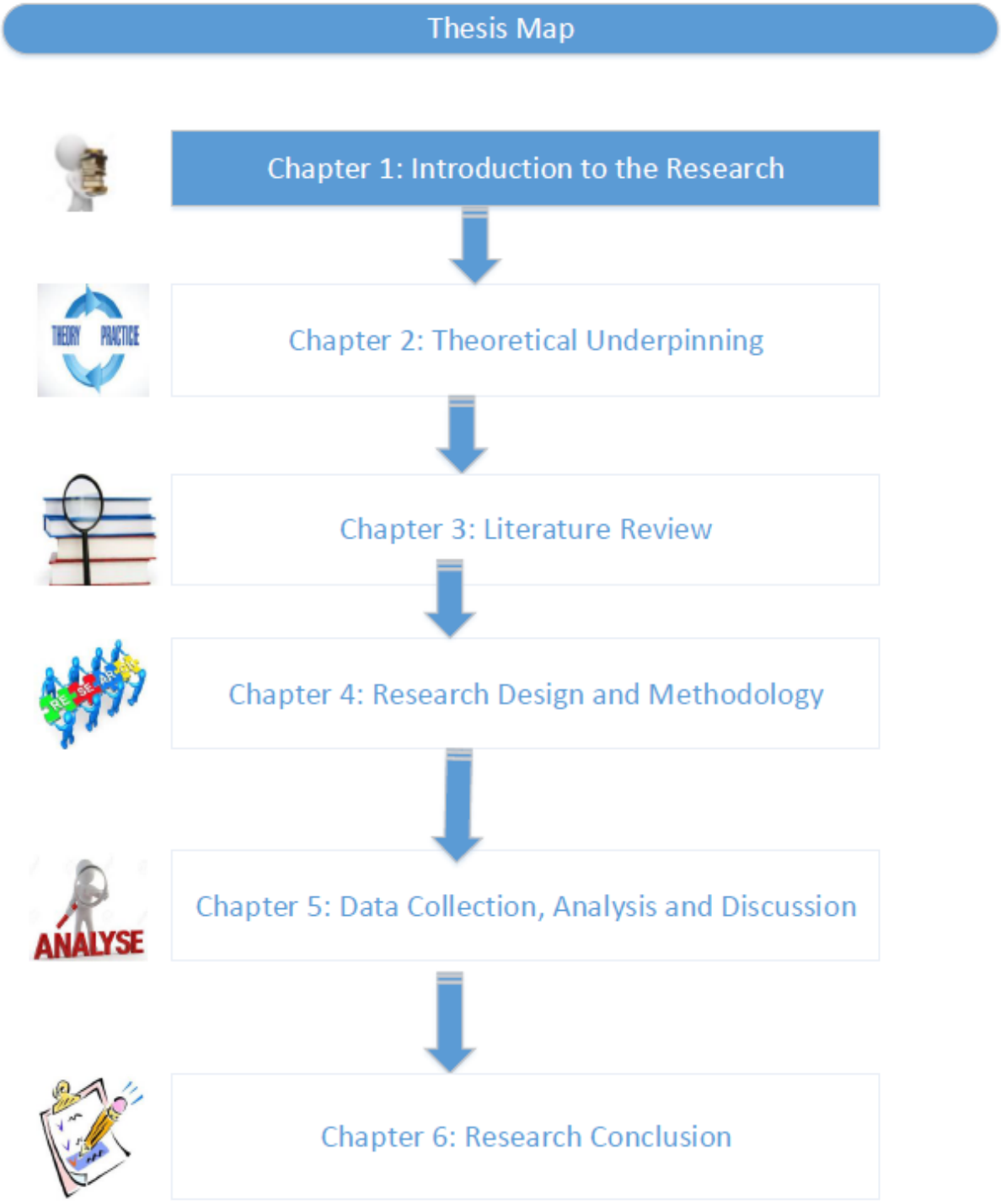

Figure 1-1: Thesis map

1.1 INTRODUCTION

Learning “is no longer about providing materials for people to learn and be tested on like parrots as our entire ecosystem of working, learning and developing has evolved” and is still evolving daily (Stodd, 2014). However, the first thing that comes to mind when the word *learning* is mentioned is school or some form of formalised learning environment (Sefton-Green, 2004). The problem in this kind of thinking is that at times the other type of learning which takes place as part of our normal day-to-day duties is overlooked (Sefton-Green, 2004). Latchem (2014) concurs, arguing that the type of learning that is heavily embedded in people’s everyday life is hardly recognised as learning. In a study conducted by Sefton-Green (2004), she concludes that with the emergence of computers and other aspects of Information and Communication Technologies (ICTs), the way learning can take place has changed, particularly among children as these technologies allow children and young people a wide of variety of experiences and activities that can support learning. She further states that due to our conventional understanding of the term *educational* it is sometimes not easy to classify these experiences and activities as learning since they do not take place in traditional educational settings as we know them. “Children and young people learn through a variety of formal and informal experiences within the classroom and more broadly in their home, in the community – and now in online spaces” (Swist, Collin, McCormack, & Third, 2015).

It is not surprising that some researchers have described informal learning as something unavoidable (Yaşar and Karadeniz, 2011); spontaneous (Eshach, 2007) and influenced by interactions with people, our hobbies, like the TV programmes we watch, searching the Internet and social life (Eshach, 2007; Yaşar and Karadeniz, 2011). One does not need to have intentions to learn in order to learn; by virtue of individuals having interactions with one another, be it face to face or through the Internet as a medium of communication, one is bound to learn (Yaşar and Karadeniz, 2011; Marsick and Watkins, 2015). Studying informal learning, particularly for children, should become one of the focus areas for researchers as, according to Lachem (2014), ICTs-enhanced informal learning is a fundamental part of children’s education;

it not only promotes the development of children's technical knowledge and skills but also enables children to reflect upon how they view and understand the world; it stimulates both cognitive and behavioural dimensions in children's development and promotes learning through online communities such as social media.

According to Greenhow and Robelia (2009), today's adolescents spend most of their time online, regarding themselves as Internet-savvy. O'Keeffe, Clarke-Pearson, and Council on Communications and Media (2011) concur with Greenhow and Robelia, as they argue, "Using social media Web sites is among the most common activities of today's children and adolescents". Blair, Millard, and Woollard (2014) concur, arguing that social media is a "tool of choice for teenagers". Livingstone and Brake (2009) suggest that since the introduction of social networking sites in the 1990s there has been a massive uptake of these by children, more so teenagers and young people across the globe. Social media sites refer to any site that allows social interaction (O'Keeffe et al., 2011).

As discussed above, informal learning occurs through our day-to-day experiences, including the interactions we have on social media sites. Children are becoming aware of the informal learning benefits offered by social media as they continue to show interest on social media sites (Swist, Collin, McCormack, and Third, 2015). Social media is gaining popularity as a powerful tool of choice for informal learning, especially among teenagers (Blair et al., 2014). One of the reasons that social media sites have become so popular in informal learning is found in the argument presented by Song and Lee (2014) who suggest that the web (world wide web) provides its users with opportunities to learn on the go (anywhere, anytime and from anyone). Another reason that makes informal learning more appealing on the web is the fact that the learners determine their pace and they become the tester of their own learning (Song and Lee, 2014).

In the subsequent sections of this chapter, the researcher discusses the following elements of the research project:

- Background to the problem
- Problem statement

- Motivation for the research
- The purpose of the study
- Assumptions and limitations of the study
- The structure of the dissertation

1.2 BACKGROUND TO THE PROBLEM

The rapid increase in the adoption of social media sites and in mobile device ownership by children have compelled academics to focus on studying and understanding the impact of these phenomena on children (Swist et al., 2015). From the literature, it is clear that social media provide various positive aspects for children (Richards, Caldwell, and Henry, 2015). Sharples, Graber, Harrison, and Logan (2009), in their study, conclude that there are many learning opportunities offered by Web 2.0 for people of all ages as social media provides rich and rewarding learning experiences. Chassiakos, Radesky, Christakis, Moreno, and Cross (2016) agree, suggesting that the use of social media exposes children to new ideas and provides "immersive learning experiences" for them. Moreover, although it is a known fact that the use of new media comes with benefits, the extent to which the learning takes place is dependent on a number of factors, such as child's age and development, the child's characteristics, what media content the child is exposed to and whether or not the child uses the media with or without parental guidance (Chassiakos et al., 2016). Although many benefits are associated with using social media, it is important to note that use of social media sites poses certain risks to young children (Sharples et al., 2009). Risks such as children being exposed to inappropriate content, being bullied online and being exposed to inappropriate people are cited by scholars as reasons that parents or those responsible for children should be cognisant of (Sharples et al., 2009). Research findings from many scholars (Sharples et al., 2009; O'Keeffe et al., 2011) about risks faced by children when using social media have resulted in many parents being fearful of their children engaging in social media.

Risks associated with children's social media use have prompted parents to either deny their children access to social media sites (Tynes, 2007) or exercise stringent controls as far as access is concerned. Even schools have gone the route of blocking

devices that would potentially allow children to access social media sites during school hours (Clark, Logan, Luckin, Mee, & Oliver, 2009). While the idea of blocking or putting controls in place may seem to be the best option as far as the safety of children is concerned, Tynes (2007) labels it as being "too safe". Tynes (2007) argues that this may rob the children of the many good learning opportunities the world of social media has to offer; for example participation of children in social media sites "can foster learning that reinforces and complements what is taught in traditional classrooms" (Tynes, 2007). According to Livingstone, Haddon, Görzig, and Ólafsson (2011), the acts of blocking or allowing children to explore freely on social media could end up being a lose-lose situation. In their study, Blum-Ross and Livingstone (2016) agree with Livingstone et al. (2011) as they conclude that even though parents who restrict their children's access to the Internet may experience reduced exposure to risk the children would miss learning opportunities available in the digital space. However, allowing children unlimited access to social media could expose them to all the risks and dangers associated with social media usage (Livingstone et al., 2011). Both Livingstone et al. (2011) and Blum-Ross and Livingstone (2016) agree that combination approaches are the best; balancing the two (allowing access and limiting certain usage) is vital for the development of children. The reality is that social media is going nowhere; it is here to stay and young people are increasingly using it (Richards, Caldwell, and Henry, 2015).

Many social networking sites have the minimum required age set to 13 years in order to create a personal profile or to use the site. However, children have a way of by-passing such rules; moreover, the sites themselves have no way of proving whether the age captured is correct, and rely only on the user to input the correct date of birth (Forsyth and Malone, 2010). Due to the lack of restrictions around subscriber's age on social, more and more younger children are exposed to social media sites. For example, in a study conducted by Livingstone et al (2011), it was found that 38 per cent of 9 to 12 year olds have a social networking site profile with 28 per cent displaying incorrect age on their social networking site profiles. It is no surprise that children as young as two years old are able to do basic navigation on phones or smart devices. In a study conducted by Kabali et al. (2015), it was discovered that "at the age 2, most children use a device daily and spend comparable screen time on television and mobile devices". In their study, they further determined that YouTube

content was the most popular with young children. While children may just be playing with the device, it is possible for them to stumble upon certain content on the web unintentionally. While a social networking site like YouTube may be considered as an online "video repository offering family entertainment channels" (Buzzi, 2012) children can be exposed to inappropriate content such as pornography which is flooding the Internet (Buzzi, 2012) if it is not properly controlled. While these risks are real, with some parents feeling they are a good enough reason to hinder children from accessing social media, it is important to strike a balance to prevent a situation where children miss the learning opportunities presented by social media. In conducting this study, the researcher unpack the informal learning opportunities on social media and show how children and parents can take advantage of them.

1.3 PROBLEM STATEMENT

There is currently under-representation in the literature of the benefits of using social media as a learning tool for children. Furthermore, it is not known how much YouTube can contribute to informal learning for children (Setyowati, 2017). There is no clear understanding of how and why learners use social media, particularly YouTube, and there is little empirical research regarding the purpose of children using YouTube as an informal learning tool.

Lange (2014) reasons that it is important that scholars begin to view YouTube from an education perspective “by paying attention to what and how kids are learning while hanging out on YouTube”. According to Mao (2014), most studies have investigated the use and benefits of social media "either as individual tools or as a general category" in higher education, with only a few studies choosing to focus on K-12 education, also known as the basic education in South Africa. Greenhow and Lewin (2016) concur with Mao (2014), saying that this area is currently under-theorised. Among the most popular reasons cited for this lack of research is "students' age and schools' responsibility and protection awareness" (Mao, 2014). Although informal learning as a concept has been studied, there is a gap in current literature about how parents, teachers and children can take advantage of the unintentional or informal learning opportunities presented by the world of social media. Thus, this descriptive study seeks to examine how and why children aged 11 to 13 years use YouTube in

their daily lives and what the informal learning opportunities available for children on YouTube are.

1.4 MOTIVATION FOR THE RESEARCH: SIGNIFICANCE OF THE STUDY

Many scholars recognise that “children are immersed in ICT-related activities in their homes and with their friends” (Sefton-Green, 2004). Academic scholars have studied informal learning on social media. For example, in a study of graduate students conducted by Czerkawski (2016), she discovered that "the most commonly used informal learning networks" by the graduate students were "Facebook, LinkedIn, Google+, YouTube, Delicious, Piazza, Twitter, Google Apps, Reddit, and professional networks and communities". However, there is a gap in current literature about how parents, teachers, and younger children can take advantage of the unintentional or informal learning opportunities presented by the world of social media. The purpose of this study is to explore in detail informal learning opportunities for children using social media. The study investigates particularly YouTube as a social media medium that can be used to achieve and reap the learning benefits offered by social media platforms. Burlington (2016) states, "Despite the enormous proliferation of instructional and educational videos available via the internet video repository YouTube, relatively little is known about how learners are using this resource for informal learning". The current study focuses on children aged 11 to 13 years.

1.5 PURPOSE OF THE STUDY: RESEARCH OBJECTIVES AND QUESTIONS

The main objective of the research is to understand the benefits of using social media as an informal learning tool for children aged 11 to 13 years. Understanding how and why children use social media should help those involved with children and learning to make informed decisions. The participants were the children themselves, implying the views were recorded from first-hand experiences. Due to insufficiency of empirical research, the researcher embarked on the current study, seeking to answer the following main research question:

How do children aged 11 to 13 years benefit from using YouTube as an informal learning tool?

To answer the main research question, the researcher explored the following secondary objectives / research questions:

Secondary objective 1*:* it is evident from current literature that children spend much time on social media. The reasons for using social media vary from social networking to doing homework and completing school projects. In order to understand if there are any benefits for children using YouTube, it is important to understand *why children use YouTube* (own emphasis). This secondary objective has resulted in the following secondary research question:

i. **Secondary research question 1:** Why do children use YouTube?

Secondary objective 2: To understand what informal learning opportunities are available on YouTube, it is important to understand how children use YouTube. The "how" as suggested in Social Cognitive Theory has an impact on behaviour. The "how" also determines the intensity of use. This secondary research objective has resulted in the following secondary research question:

ii. **Secondary research question 2*:*** How do children use YouTube?

Secondary objective 3: Although YouTube may come with learning benefits, it is important to understand the risks associated with using YouTube, whether children are aware of these risks and whether they have coping mechanisms or measures in place to deal with the risks while enjoying learning benefits. This secondary research objective has led to the following research question:

iii. **Secondary research question 3:** Are children aware of the risks associated with using YouTube? What tools or resources do children use to alleviate the risks?

Secondary objective 4: In a study conducted by Schugurensky (2000), he concluded that informal learning could take on three forms, namely Self-directed learning, Incidental learning and Socialisation learning. The researcher, through a series of questions, aimed to discover which of these take place when children make use of YouTube.

iv. **Secondary research question 4:** What types of informal learning for children take place when they use YouTube?

1.6 ASSUMPTIONS OF THE STUDY

The researcher undertook the study bearing the following underlying assumptions in mind:

- The researcher was of the view that, at the bare minimum, children based in urban areas of South Africa should have had some kind of exposure to a cell phone or Internet use, including the use of YouTube. She therefore assumed that if not all the children, the majority selected for the study would know what YouTube was, from either personal experience or the experiences of others.
- South Africa is known to be a multi-lingual country (Jantjies and Joy, 2015) and as such, it is not uncommon to find all eleven official languages at play in a given situation, particularly in the province of Gauteng. However, the interviews were conducted in English and the assumption was that the children would be able to converse and participate easily in the groups using the English language. This assumption was justified by the fact that the selected school was an English-medium school.

1.7 LIMITATIONS OF THE STUDY

To assess the contributions of the current study fully it was important to examine the limitations of the study prior to conducting the research. The researcher identified the following as limitations to the study:

- The study was limited to primary school children aged 11 to 13 years as they are in a particular vulnerable age group. This age group is below the minimum acceptable age group for most social media platforms. However, evidence has shown that they do make use of social media platforms. Given the age, they will be able to provide rich descriptions of their social media use and experiences which is necessary for the study.
- Furthermore, it is important to note that all the children that were interviewed came from one school situated in Centurion (Gauteng province), South Africa.

- The children were not grouped according to gender or race prior to the data collection process, and as such, generalisation using these two variables may not be possible.
- Finally, while the researcher was aware that informal learning may take on many forms, varying from the location to many kinds of interaction, this study focused solely on informal learning that took place using YouTube.

1.8 STRUCTURE OF THE DISSERTATION: BRIEF CHAPTER OVERVIEW

The dissertation comprises six (6) chapters. A brief overview of each chapter is provided below:

Chapter 1 Introduction to the Research: In this chapter, the researcher defines the background to the study, the problem statement, the objective of the study, and states what the motivation for the research was. The researcher details the main research question together with the sub-research questions that were explored. Finally, the researcher states both the limitations to and the researcher's assumptions before the study commenced.

Chapter 2 Theoretical Underpinning: In this chapter, the researcher defines Social Cognitive Theory and its relevance to the current study. Background to the theory, its main concepts and its criticism are described in detail in this chapter.

Chapter 3 Literature Review: This chapter presents insights gained from existing literature as IT relates to the current study. The literature review is structured in such a way that it relates to the problem under investigation. The researcher organised the literature review chapter into the following themes:

- **Theme 1 Informal learning:** For this theme, the researcher defines informal learning, contrasts informal learning to formal learning and defines types of informal learning.
- **Theme 2 Social media and learning:** For this theme, the researcher defines social media as an environment that is beneficial to, supports and promotes informal learning. Furthermore, the researcher explores the different types of informal learning that take place in social media.

- **Theme 3 Children and social media use:** For this theme, the researcher explores how children use social media, why they use it and the risks associated with use of social media.

Chapter 4 Research Design: This chapter is the puzzle that unifies the research process. In this chapter the researcher details how she went about to conduct the research. Justification of the philosophy, strategy and data collection methods are detailed in this chapter.

Chapter 5 Data Collection, Analysis and Discussion: In this chapter, the researcher makes meaning of the raw data collected. The researcher reviews, analyses and discusses the data in the light of the main research objective of the study.

Chapter 6 Research Conclusion: The researcher presents the findings of the study and the conclusions drawn. Furthermore, recommendations, the contributions and suggestions for future research are presented in this chapter.

1.9 CONCLUSION

In spite of the fact that social media use and its benefits has been studied intensively, there is currently a gap in the literature regarding the informal learning that takes place with social media and how children can benefit from it. Children spend much of their time on social media and yet benefits of using such media for learning is an under-theorised topic. Table 1.1 shows a summary of Chapter 1:

Table 1-1: Summary of Chapter 1

Summary of Chapter 1	
Research Problem	With many scholars recognising that children are immersed in social media use and its related activities it is crucial for scholars to explore the benefits of using social media for children's learning. The purpose of this study is to explore in detail informal learning

Summary of Chapter 1	
	opportunities for children using social media. The study investigates YouTube, particularly as a social media medium that can be used to achieve and reap the learning benefits offered by social media platforms. According to Burlington (2016), "Despite the enormous proliferation of instructional and educational videos available via the internet video repository YouTube, relatively little is known about how learners are using this resource for informal learning".
Motivation for the Research	Existing literature does not dwell on the benefits of social media, particularly as an informal learning tool for children. Many studies have been conducted to highlight the risks associated with children using social media. By highlighting the learning benefits associated with using social media, the researcher aims to enlighten the research community, parents, educators and even children themselves.
Research Objective	The main objective of this study is to understand the benefits of using social media as an informal learning tool for children.

In the next chapter, the researcher defines the theoretical underpinning for the current study.

2 CHAPTER 2: THEORETICAL UNDERPINNING

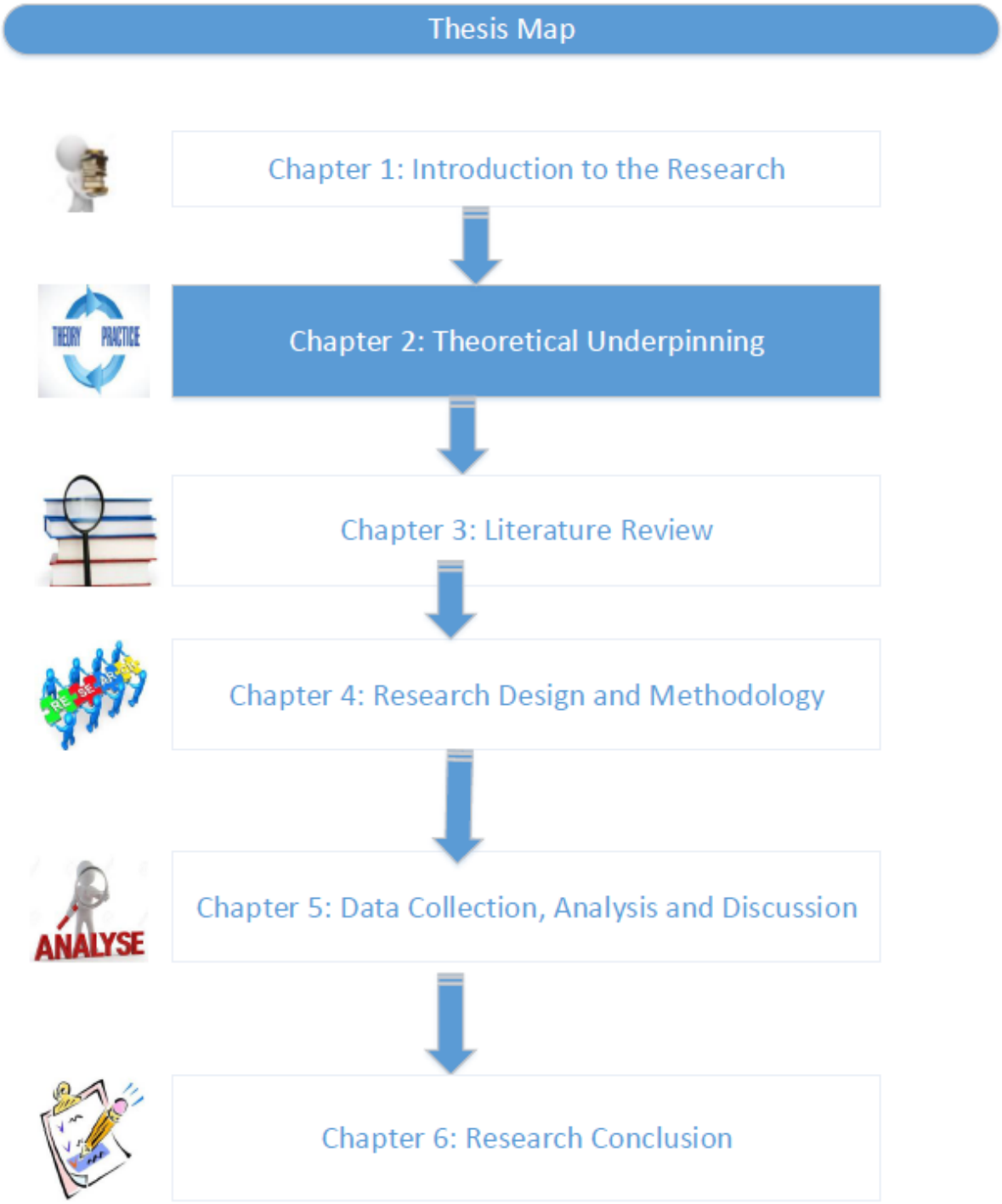

Figure 2-1: Thesis map

2.1 INTRODUCTION

The main objective of the research is to understand the benefits of using YouTube as an informal learning tool for children aged 11 to 13 years. This study relates to social media use research discipline. A theoretical framework that underpins the behaviours associated with using social media that could account for the child using social media within his/her informal learning environment was sought. The researcher adopted Social Cognitive Theory as the theoretical framework for the study.

In the next section, the researcher discusses in detail the background to the theory, its main concepts, criticism and its applicability to the study.

2.2 THE SIGNIFICANCE OF A THEORETICAL FRAMEWORK

According to Schunk (2012), a theory is “a scientifically acceptable set of principles offered to explain a phenomenon… Without theories people could view research findings as disorganized collections of data, because researchers and practitioners would have no overarching frameworks to which the data could be linked”. Bhattacherjee (2012) agrees as he defines a theory as “a set of systematically interrelated constructs and propositions intended to explain and predict a phenomenon or behavior of interest, within certain boundary conditions and assumptions”. However, Bhattacherjee (2012) notes that defining what theory is is not good enough if we do not understand what it is not. While at times it may seem that theory is “data, facts, typologies, taxonomies or empirical findings”, these are not theory (Bhattacherjee, 2012). These operate at the empirical or observational level while theory is based on logic and observations and operates at the conceptual level (Bhattacherjee, 2012). Bhattacherjee (2012) lists four benefits of using theories in research: (1) Theories are useful in explaining both the key drivers and key outcomes of the target phenomenon, and why and what processes are responsible for driving that phenomenon by giving a detailed account of underlying logic of the occurrence of the natural phenomenon. (2) Prior empirical findings are synthesised within a theoretical framework and contradictory findings are reconciled by discovering contingent factors influencing the relationship between two construct in different studies. (3) Theories can also be used to provide a basis and guidance for future

research by identifying contrasts and relationships worth of future study. (4) Finally, theories contribute to cumulative knowledge building by bridging gaps between other theories and by causing existing theories to be re-evaluated in a new light.

It is for the above reasons that the researcher decided to place the current study within a theoretical framework. To understand how children learn, both at an individual and social level, one needs to study learning theories. Trying to understand how children can use social media as a learning tool without understanding how children learn would be like "trying to erect a building on shifting sand" (Kivunja, 2014). The main idea of a learning theory is to describe how learning takes place. When those who are involved in learning activities understand the theories that underpin learning, they are best equipped in ensuring that the learning activities are of value to the learners. According to Kivunja (2014), "an understanding of learning theories is crucial to effective teaching because theories help us to understand how learners make sense of what they come into contact with, how they construct new knowledge, build on their current schema and apply what they have learnt to further their understanding of new ideas and concepts". Over the years scholars have tried to define learning theories. Although some believe there are many learning theories out there, there has been a consensus that these learning theories can be classified into three main categories, namely, behaviourism, cognitivism and constructivism (Kivunja, 2014; Siemens, 2005).

Key differences between these theories lie in the way in which learning is defined, the underlying principles of each theory, the roles of the teacher and learner, and the learning applications applicable to each (Kay and Kibble, 2016). Kay and Kibble (2016) discuss these key differences in detail; however, for the purpose of this study the focus is on how learning is defined within these theories. In behaviourism, learning is defined by "observable increases, decreases, or maintenance of identified behaviors" (Kay and Kibble, 2016). The primary focus of behaviourism is the relationship that exists between the learning environment and behaviour. In cognitivism, the view is that "learning is an internal mental process that includes receiving, decoding, storing, and recalling information". In extending this definition, Kivunja (2014) suggests that the primary focus of cognitivism is on how the learner and the environment relate. In this theory, the way the learner thinks and how he or she participates in the task are

interlinked as they determine how learning takes place. Interestingly though is that there is one similarity that exists between behaviourism and cognitivism, namely the fact that in the two theories, learning is regarded as something external to the learner (Siemens, 2005). This is where constructivists differ; for example, Kay and Kibble (2016) define learning in the view of the constructivist as "an individual construction process" whereby "learners construct knowledge as they interact with their environment". As different as these theories are, their aim and objective are to define and unpack how the process of learning takes place.

Bandura's Social Cognitive Theory (SCT) serves as a theoretical framework for this study to explore the benefits of using social media as an informal learning tool for children (Bandura, 1999a). SCT has been widely applied in both education and IT research (Chiang and Hsiao, 2015). Chiu, Hsu, and Wang (2006) agree with Chiang and Hsiao, suggesting, "The Social Cognitive Theory has been widely applied in the information systems literature with demonstrated validity". Chen (2015) suggests that SCT is generally the theory of choice among scholars who embark on studying the behaviour of users on social networking sites. Scholars have at times compared SCT to the behaviourists' theory of learning; however, the representation of learning as a unidirectional relationship caused scholars to look for alternatives and SCT was one of the theories that could close the gap. In the next section, the researcher discusses in detail the elements of SCT.

2.3 SOCIAL COGNITIVE THEORY: BACKGROUND

Despite the fact that it is widely used in many fields, SCT, also known as Social Learning Theory (SLT) (Rosenstock, Strecher, and Becker, 1988) has its origins in the psychology field and was coined and theorised in 1989 by a Canadian psychologist, Albert Bandura (Chen, 2015). "Social cognitive theory is rooted in the notion of human agency, which suggests that individuals are proactively engaged in their own development and that they are able to exercise a measure of control over their thoughts, feelings, and actions" (Stefanone, Lackaff, and Rosen, 2010). Cognitive theorists believe that there is an "on-going reciprocal interaction" (Compeau and Higgins, 1991) between behaviour, environment and cognitive factors (Bandura, 2001b). As depicted in Figure 2-2 Bandura (1999b) calls this relationship a "triadic

reciprocal causation". Regarding this triadic reciprocal causation, Bandura (1999b) disputes the idea that learning is a unidirectional relationship. Instead, the key principle of the triadic reciprocal causation is that the way in which individuals view the outcomes of their actions has a direct impact on their environment and personal factors and this in turn has an impact on behaviours that occur at a later stage. Crucial to understand, within the triadic causation, is that the reciprocal interaction does not follow a certain fixed pattern, but rather the "contribution of each of the constituent classes of influences depends on the activities, situational circumstances and socio-structural constraints and opportunities" (Bandura, 1999a). Furthermore, within this triadic reciprocal causation, the different factors (i.e. environmental, behavioural, and cognitive) are not necessarily of equal strength, nor do they occur simultaneously even though they influence each other (Bandura, 1989). In other words, the relationship is not monolithic. According to Chiu et al. (2006) "A person's behaviour is partially shaped and controlled by the influences of their environment (i.e. social systems) and the person's cognition (e.g. expectations, beliefs)". Stefanone et al. (2010) support Chiu et al., arguing that social cognitive theorists explain human function as a "product of dynamic interaction of personal, behavioral, and environmental influences".

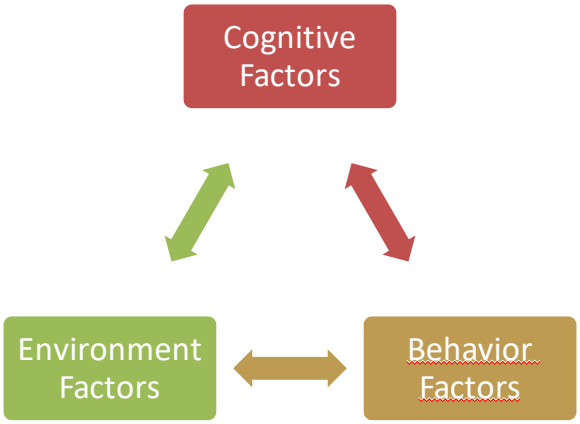

Figure 2-2: Social cognitive theory triadic reciprocal causation (Adapted from Bandura (1999b))

In social cognitive theory, behaviour is deemed a "component of function" as individuals have the ability to reflect on the "effects of their own behaviour" (Stefanone et al., 2010). By adopting social cognitive theory, the researcher was able to explain "how and why people acquire and maintain certain behavioural patterns". In the light of this, the researcher was able to determine why and how children use YouTube.

Figure 2-3 below describes Social Cognitive Theory constructs as they relate to the current study.

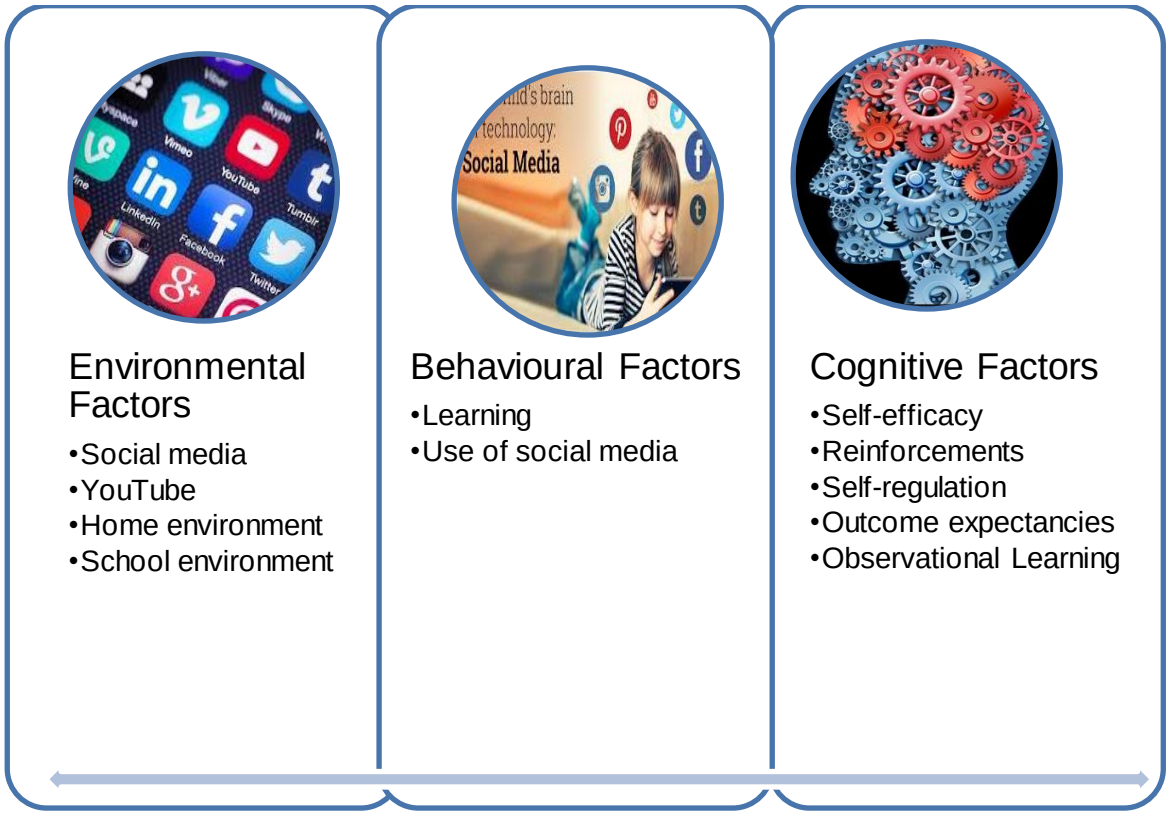

Figure 2-3: SCT Constructs: Environmental, Behavioural and Cognitive Factors (Adapted from Bandura (1999b))

In the next section, the researcher briefly discusses each of the social cognitive factors, namely environmental factors, behavioural factors and cognitive factors. The implications of these factors for the current study are discussed.

2.3.1 SCT: Environmental Determinants

An environment is defined as "any factor physically external to the individual that can impact one's behaviour" (MDQuit.Org, 2018). Environmental factors take into account the social situation context, what roles people play in that context, the social models and the relationships that exist within that context (Bandura, 2001a). Social cognitive theorists distinguish three types of environmental structure, namely (1) imposed environment; (2) selected environment, and (3) constructed environment (Bandura, 1999b). The first environmental structure, imposed environment can be described as

the environment where the individual does not have a choice in terms of the existence of the environment. In this environment, the individual does not define the rules, but is expected to follow the rules (Bandura, 1999b). However, Bandura (1999b) suggests that individuals do have “leeway in how they construe” the environment and their reaction to it.

In the context of the current study, home environment and school environment can be classified as the imposed environment. In these environments, the children have to abide by the rules. When the school says *No YouTube during school hours* (own emphasis), then there is no access to YouTube during school hours. Any behaviour contrary to that will result in disciplinary consequences. Similarly, at home the children know that if the parents have put certain rules in place, they are expected to abide. For example, in some homes there are rules around how and when children can use social media. The second environmental structure is the selected environment. The individual chooses to be part of this environment; he or she decides how to construe and relate to this environment (Bandura, 1999b). In the context of this study, social circles, such as the friendships that humans form, can be described as the selected environment. The last environmental structure is the constructed environment. The individual creates this environment (Bandura, 1999b). Social media interactions can be described as the constructed environment.

As part of this study, the researcher sought to understand how environmental factors shape the use of social media by children. According to Swist et al. (2015) personal and social circumstances of children shape how they use social media.

In the next section, the researcher defines behavioural determinants.

2.3.2 SCT: Behavioural Determinants

Behaviour is defined as “the manner in which a person reacts to various inputs from their environment” (MDQuit.Org, 2018). Historically, the interaction between behavioural factors and environmental factors has received the greatest attention amongst scholars (Bandura, 1999a). According to Bandura (1999a), as people

perform their day-to-day activities, their behaviours change their environmental conditions and vice versa, the environmental conditions are changed by the very behavioural conditions they have created. In the context of the current study, behaviour is described as the use of YouTube and the learning that takes place as result of using YouTube. As stated in Section 2.3.1, as part of the study, the interaction between the various environmental structures and the use of YouTube by children has been assessed.

2.3.3 SCT: Cognitive Determinants

People's thoughts, their beliefs and feelings all affect how people behave (Bandura, 1999a). Cognitive determinants can be defined as the "various mental processes that occur within an individual, such as behavioural capability, outcome expectancies, emotional copings and feelings of self-efficacy" (MDQuit.Org, 2018). Raingruber (2013) lists self-regulation, outcome expectations, self-efficacy, observational learning and reinforcements as the main cognitive concepts of SCT. These concepts are discussed in detail in the following sections.

2.3.3.1 Observational learning / Modelling

SCT emphasises that elements of what an individual learns and acquires "can be directly related to observing others within the context of social interactions, experiences, and outside media influences" (Boundless, 2016). According to Straub (2009), observational learning (OL) is "one of the foundational concepts of SCT". The principle of OL is that individuals have the capability of learning from the experiences of others just in as much as they learn from their own experiences. By observing others' behaviours, individuals get to understand how certain behaviours are performed, which in turn eliminates costly mistakes and errors when they try to perform the behaviours themselves (Cheung, Liu, and Lee, 2015). There is a deliberate or inadvertent occurrence of human learning by observing behaviours of others and the consequences of those behaviours (Bandura, 1999a). In addition, Eastin (2005) suggests that observational learning plays a key role in helping individuals decide what specific tasks they will engage in or take part in. When individuals observe the behaviours of others, they develop rules to guide their subsequent actions (Pajares,

Prestin, Chen, and Nabi, 2009). According to Stefanone et al. (2010), “the observational learning process requires a model, a learnable attitude or behaviour and a conducive personal/behavioural/environmental context”. In the present study, both the peers and the YouTube content were viewed as models. Social media, in particular YouTube, serves as the environment and the learning that takes place is deemed the behaviour. In the light of OL it can be said that children learn by observing how other children use YouTube. Furthermore, viewing the YouTube videos, and reading comments relating to the videos of interest can also be viewed as another form of informal learning that can take place on social media.

2.3.3.2 Outcome Expectations

Learning and motivation are affected by perceived consequences of behaviour, as people tend to work towards reaching the expected outcome and in the process shun the undesired outcome (Schunk, 2012). Outcome expectations (OE) can be defined as “judgments of the likely consequences of a behaviour” (LaRose, Mastro, and Eastin, 2001), which “provides incentive for enacting behaviour” and provides disincentive when behaviour is expected to be aversive (LaRose et al., 2001). In view of the current study, OE can be viewed as the SCT component that determines the use of social media. If children or even parents expect that by using YouTube they stand to benefit, i.e. learn and make new (good) friends, then it is highly likely that they will prefer to use more of YouTube. However, if the perceived outcome expectation is that children will be exposed to the wrong crowd, inappropriate content, negative impact on school performance and risky behaviour, then it is highly likely that social media use will be avoided. In fact, it can be argued that when schools and / or parents conclude to block social media use, outcome expectations are at play. From the above it is clear that outcome expectations of SCT are a crucial factor in studying social media use by children.

2.3.3.3 Self-efficacy

According to Raingruber (2013), self-efficacy is a crucial factor in SCT because for change to be initiated, self-efficacy must be present. Self-efficacy is defined as “beliefs in one’s capabilities to organize and execute the courses of action required to produce

given attainments" (Bandura, 1997). Self-efficacy has a direct influence on what activities people choose to perform, how much effort they put in performing the activities, and what coping mechanisms they use to handle failure if it occurs (Bandura, 1997). Perceived self-efficacy for social media use assesses children's belief in their ability to navigate and use social media with ease. When children positively believe in their capabilities to navigate and search for information on YouTube, they are encouraged to use YouTube frequently. However, low self-efficacy may result in children avoiding to use social media due to fear of failure. It can also be argued that when children have low self-efficacy regarding forming new friendships on social media they may tend to shy away. The age group of the participants is a stage where identity formation is crucial, and adolescents use social media to find their identities. It is crucial, therefore, that high self-efficacy is present in order to use and benefit from social media effectively.

2.3.3.4 Reinforcements

The significance of reinforcement in learning is that individuals will increase behaviour that result in positive outcomes; vice versa, they decrease whatever has resulted in a negative outcome. In other words, individuals learn from the consequences of their actions (Raingruber, 2013; Cheung et al., 2015). For example, if a child posts a video on YouTube and receives many "likes" it can be a form of reinforcement that will encourage him or her to post content of similar quality.

2.3.3.5 Self-regulation

Self-regulation is another important element of SCT. "The self-regulatory mechanism describes how individuals continually monitor their own behavior (self-monitoring), judge it in relation to relevant personal and social standards (judgmental process), and apply self-reactive incentives to moderate their behavior (self-reaction)" (LaRose and Eastin, 2002). Self-regulation can be assessed both on its influence on the intensity of use and on its influence on learning. Firstly, self-regulation plays a crucial role in controlling the intensity of the use of social media. When self-regulation is low, people tend to get addicted to social media as they lack the cognitive ability to control the use of social media (LaRose and Eastin, 2002). Due to the fascination with social media,

it easy for children to be carried away, which may decrease the levels of self-regulation. According to O'Keeffe et al., (2011), a low level of self-regulation and susceptibility to peer pressure expose children to certain risks as they navigate social media. Secondly, when a learner has the ability to establish a process of learning that works for him or her by being able to regulate both the environment and own behaviour, the process can be defined as self-regulation at play (Beatty, 2016).

2.3.4 Main Criticism of Social Cognitive Theory

Although social cognitive theory is widely used in human behaviour research, scholars do acknowledge that it does have some limitations, particularly in the areas that the theory does not address in detail (Schunk, 2012). According to Schunk (2012), SCT has the following limitations:

- SCT does not explore human development in detail and as such, it is lagging behind in "identifying age-related changes in individuals' cognitions, affects, and behaviours" (Schunk, 2012).
- Another area that SCT has not explored is the "operation of underlying cognitive processes involved in attention, perception, and the encoding, storage, and retrieval of information from memory" (Schunk, 2012). Furthermore, cognitive load, which has implications for instruction, is not addressed in SCT.
- Finally, even though SCT does not ignore emotions, great emphasis is placed on cognition and behaviours, and not on emotions.

Boundless (2016) adds that lack of unity in the theory is one of the main criticism and this means that connecting the different parts of the theory may not be as easy it seems. Boundless (2016) further states that in spite of the fact that observational learning is listed as one of the key concepts of SCT, it may not always be possible to observe all social learning directly. Finally, Boundless (2016) state that SCT tends to ignore and overlook the various development and maturation stages; the theory does not differentiate between how children and adults learn in the different stages. Despite these limitations, Social Cognitive Theory has a profound impact on understanding the influence of cognitive processes and environmental factors on behaviour. The researcher believes that these limitations will have no

overarching influence on seeking to understand how children use YouTube as an informal learning tool.

2.3.5 Summary

In this chapter, the researcher presents the theoretical framework underpinning the study. Table 2-1 depicts the summary of the findings derived from the literature as they relate to the objective of Chapter 2.

Table 2-1: Summary of Chapter 2

Social Cognitive Theory – A Theoretical Framework: Summary	
Why use a theoretical framework for the study?	The main idea of a learning theory is to describe how learning takes place. When those who are involved in learning activities understand the theories that underpin learning, they are best equipped to ensure that the learning activities are of value to the learners.
Social Cognitive Theory	SCT emphasises that elements of what an individual learns and acquires "can be directly related to observing others within the context of social interactions, experiences, and outside media influences" (Bardach, Gayer, Clinkinbeard, Zanjani, and Watkins, 2010). SCT theorists believe that there is an "on-going reciprocal interaction" (Bandura, 1999b) between behaviour, environment and cognitive factors. For these reasons, SCT has much relevance in studies focusing on social media use.
Implications for the research	
According to Chiu et al. (2006), "SCT has been widely applied in the information systems (IS) literature with demonstrated validity". SCT has much relevance in the use of social media for learning. In a study conducted by Chen (2015) on "Linking Learning Styles and Learning on Mobile Facebook", she discusses habit strength, self-efficacy and observational	

Social Cognitive Theory – A Theoretical Framework: Summary

learning as crucial SCT factors that have an impact on how learners learn on social media as they determine how individuals use social media. In support of this view, Chiu et al. (2006) agree that self-efficacy and outcome expectancies are at the core of the theory as factors that affect human functioning. The theory underscores the interaction between environmental factors and behavioural factors is highlighted. For the purpose of the current study the researcher explored how environmental factors, such as the home environment and school environment influence how children use YouTube.

The researcher was aware that the theory has certain limitations as discussed in the literature. The theory is particularly criticised for "lack of unity" (Boundless, 2016), indicating that it is not always easy to connect the different parts of the theory. The researcher entered into the study with an open-mind regarding this limitation.

SCT constructs were used to inform the literature review presented in Chapter 3. The diagram below depicts the relationship between SCT constructs and the literature review themes.

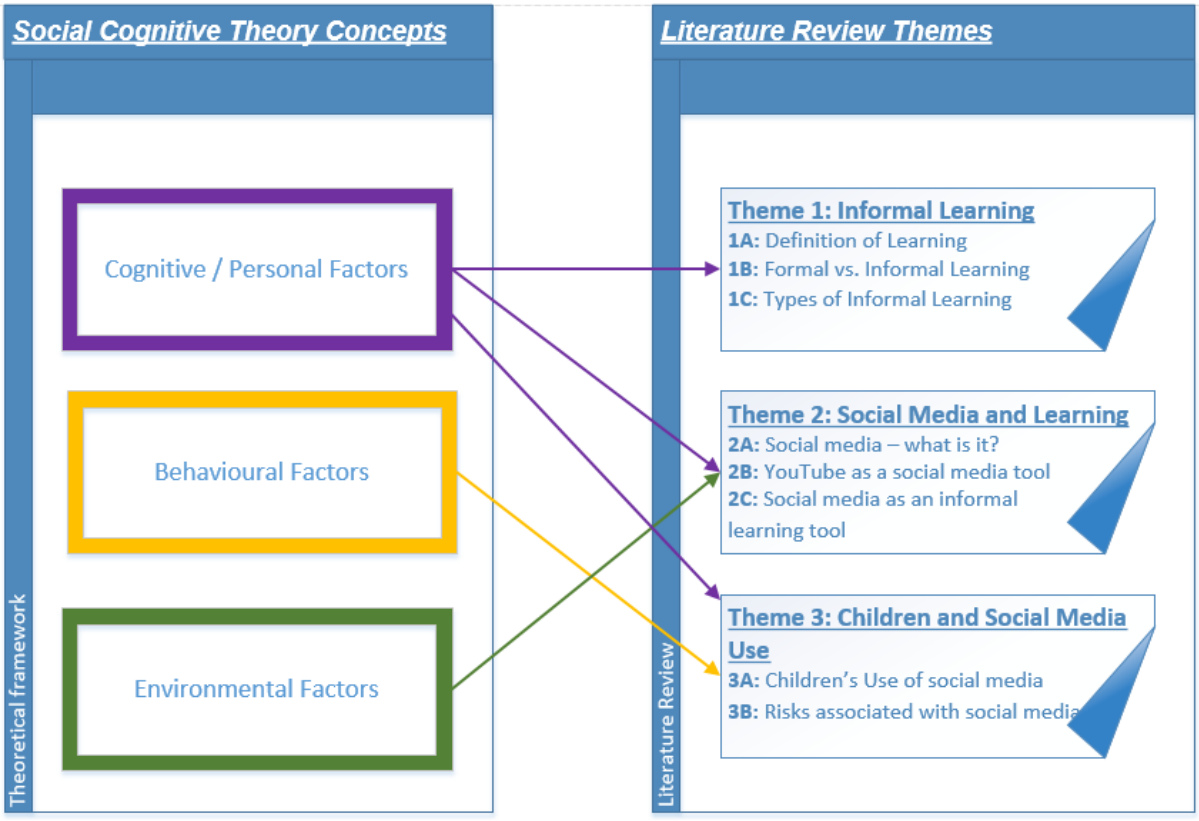

Figure 2-4: Relationship between SCT constructs and the literature review

3 CHAPTER 3: LITERATURE REVIEW

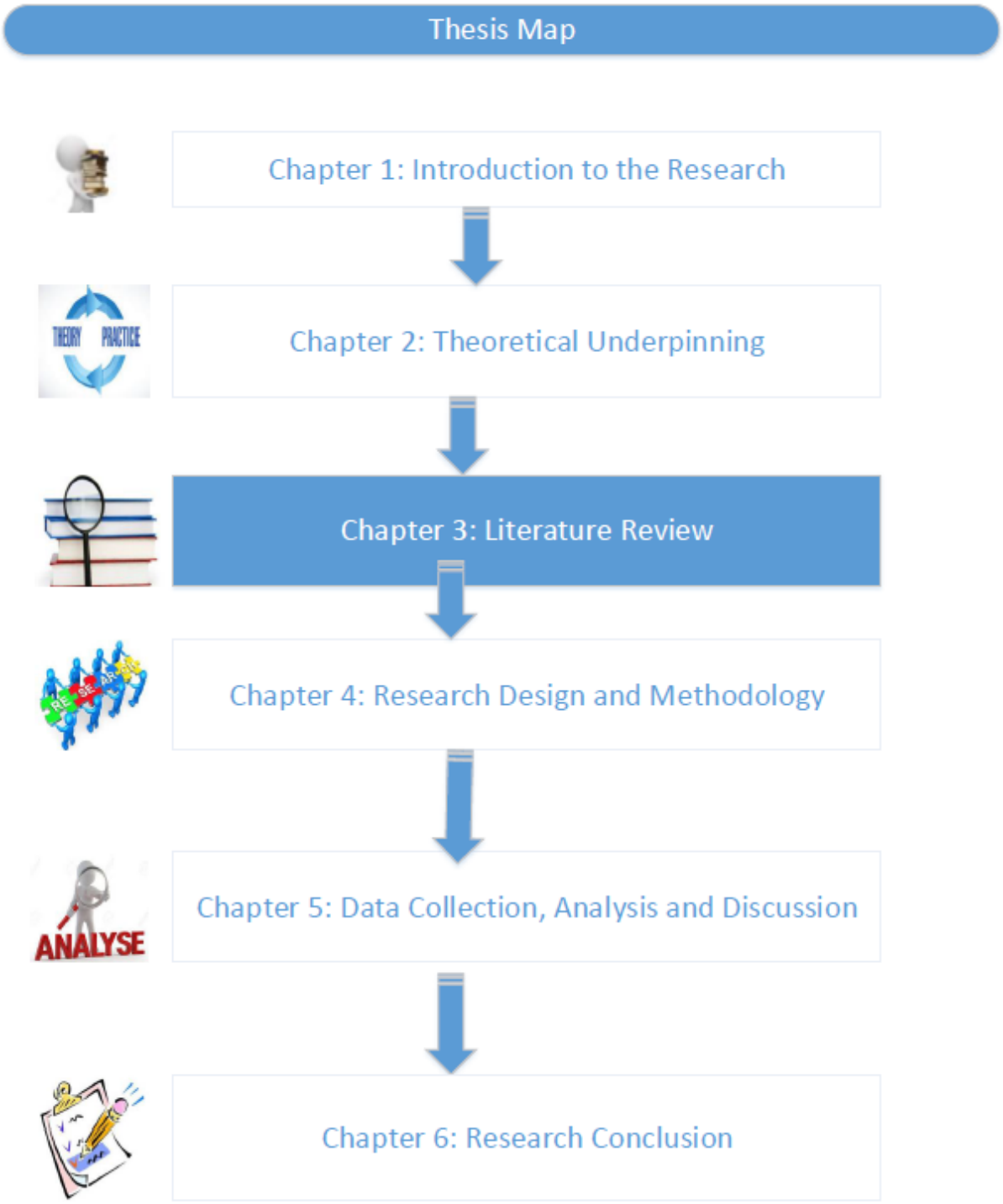

Figure 3-1: Thesis map

3.1 INTRODUCTION

The main objective of this study is to understand the benefits of using social media as an informal learning tool for children. In this chapter the researcher looks at existing academic literature with regard to informal learning, social media, how children use social media, and the benefits of and risks associated with using social media. The discussion of existing literature is structured based on the theory as discussed in Chapter 2.

3.2 SCOPE OF THE LITERATURE

Figure 3-2 depicts the scope and the order in which the literature relating to the study is presented. In order to address the research problem the researcher approached the literature using the three identified themes depicted in Figure 3-2.

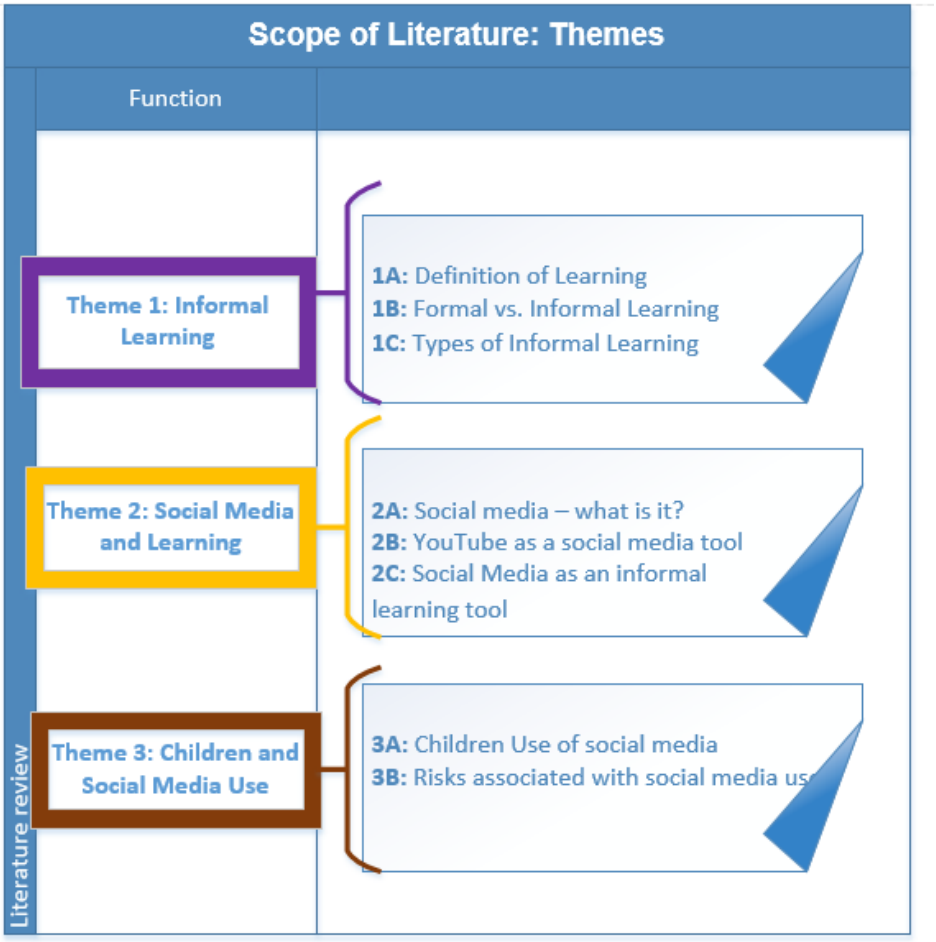

Figure 3-2: Scope of the literature

For the first theme, Informal Learning, the researcher (1A) defines what learning is, (1B) contrasts formal vs. informal learning and (1C) lists the types of informal learning. For the second theme, the researcher discusses social media and learning. Definitions and the background of social media are presented, followed by the type of informal learning that takes place using social media. For Theme 3, the researcher discusses children and social media use. How and why children use social media are discussed in detail in this chapter. Furthermore, risks associated with social media use are outlined.

3.3 THEME 1: INFORMAL LEARNING

Learning is an integral element of human existence. According to Marsick and Watkins (2015), "learning is the way in which individuals or groups acquire, interpret, reorganize, change or assimilate a related cluster of information, skills, and feelings. It is mainly the way in which humans construct meaning in their lives". While the term *learning* is usually associated with schooling (Sefton-Green, 2004), research has shown that learning happens even outside of the structured schooling system (Song & Lee, 2014). After all, we do not spend all our time in a classroom setup and there is no sudden switch off of learning once one leaves the classroom. Learning is continuous.

In this section, the aim is to define and contrast the terms *formal* and *informal learning*. To do this, it is important to take a step back to understand what learning is and why we need to study it. What is the significance of humans having an understanding of what learning is? What does learning do to human behaviour? Simply put, we study learning because "most human behaviour is learned" (Olson and Hergehahn, 2016). There is no doubt that learning is one of those complex, most important cognitive processes and as such, it becomes difficult to give one unique definition of it (Hoy, Davis, and Anderman, 2013; Olson and Hergehahn, 2016). Siemens (2005) cites the following as some of the reasons why it is challenging to define learning:

(1) "Valid sources of knowledge": In order to answer this, we have to ponder questions such as “How is knowledge gained? Does the gain of knowledge occur through our experiences? Are we born with the desire to learn?”

Alternatively, “Do we maybe acquire knowledge through reasoning and thinking?”

(2) "Content of knowledge: “Is knowledge actually knowable? Is it directly knowable through human experience?" (Siemens, 2005)

Both these reasons are challenged when considering social media as a “valid source” of knowledge (reference) and questioning the “content of knowledge” (Siemens, 2005).

3.3.1 Formal Learning vs. Informal Learning

Driscoll (2005) defines learning as a lifetime activity. He further states that "learning occurs intentionally in formal instructional settings and incidentally through experience". In this definition, Driscoll (2005) mentions to two key terms *formal instruction* and *incidental* and this suggests that there are actually two forms of learning, *formal* and *informal.* Czerkawski (2016) however, cautions that there are many controversies, ambiguity and some disagreement in literature regarding the definition of these two terms. She states that there are varying opinions in defining the environments for each of these learning forms and this is usually due the fact that at the time when learning occurs, both informal and formal learning elements are present.

Several scholars have attempted to define formal learning as "typically classroom-based, highly structured and institution sponsored" (Deng and Tavares, 2015). Latchem (2014) concurs and suggests that formal learning is a setting where educational institutions or training providers determine the goals, location and methods of teaching; formal learning takes place in academic institutions (Burlington, 2016); Adding on to this definition, Burlington (2016), suggests that the learning that takes place in formalised educational institutions has to meet certain standards as set by the governing institution. For most, this kind of learning is the only kind that could be defined as learning; researchers focused most of their attention on this type of learning until the 1970s; then there was a shift – researchers started exploring something termed "self-guided" learning which as we know it today, gave birth to the term *informal learning* (Burlington, 2016).

According to Yoo and Kim (2013), eighty per cent of learning is informal. Most of what people learn in the course of their lives is learnt outside the classroom environment, integrated mostly into the day-to-day activities that people engage in (Burlington, 2016). Classroom learning is responsible for a small fraction of what people learn only (Burlington, 2016). So, what is informal learning? It is a subject that has dominated discussion among informal learning scholars (Rogoff, Callanan, Gutiérrez, and Erickson, 2016). On the other hand, Jones, Issroff, Scanlon, Clough, and Mcandrew (2006) state that defining informal learning has not been a straightforward task and remains a cause of much debate. In addition, formal learning researchers have shown some concern about the term *informal*, citing that there is no single agreed-on definition for informal learning.

According to Yaşar and Karadeniz (2011), what makes it difficult to define informal learning is its similarity to non-formal learning. A large proportion of what we do every day constitutes informal learning. Even though there may be concerns about the definition of informal learning, one aspect that researchers seem to agree on is that this type of learning is an integral part of our daily lives. Informal learning is embedded in our daily activities to an extent that the learner does not necessarily have to have objectives of learning in order for it to happen. In fact, Pilz and Wilmshöfer (2015) suggest that it is easy for the learners themselves not to recognise that learning is taking place, as learning is mostly unintentional. Yaşar and Karadeniz (2011) agree with Pilz and Wilmshöfer (2015), arguing that the random and spontaneous structure of informal learning makes it difficult and hard to define. According to Siemens (2005), informal learning is the engine and an integral part of human learning experiences. Siemens (2005) continues to say, "formal education no longer comprises the majority of our learning. Learning now occurs in a variety of ways – through communities of practice, personal networks, and through completion of work-related tasks". Pilz and Wilmshöfer (2015) agree with Siemens (2005) and refer to informal learning as a "natural accompaniment to everyday life". As learners progress through the different learning stages, i.e. from K12 through to university, it becomes evident that informal learning has a crucial role as learning can happen anywhere at any time (Chen and Bryer, 2012).

Some key characteristics of informal learning that set it apart from formal learning, although there maybe overlapping similarities, is that with informal learning the learner is primarily in charge, setting the pace and rules of learning (Schugurensky, 2000); Czerkawski (2016) calls this learner-centred approach a "bottom-up" approach, contrasting it with a "top-down" approach or formal learning, where the teacher and institution are in charge, whether the learning is taking place individually or as a part of a group, the learner is still in charge; there are no external criteria imposed (Deng and Tavares, 2015). Dabbagh and Kitsantas (2011) echo the idea of the learner being in the driver's seat regarding informal learning, suggesting that with informal learning, the learning happens “through observation, trial and error, asking for help, conversing with others, listening to stories, reflecting on a day's events, or stimulated by general interests”. Scholars have also contrasted formal and informal learning since with formal learning the end goal is usually to get a formal qualification or certificate, whereas with informal learning there is not. For example, one of the features of formal learning listed by Schugurensky (2000) is that "at the end of each level and grade, graduates are granted a diploma or certificate that allows them to be accepted into the next grade or level or into the formal labour market". This then raises another question, namely whether the learner has not learnt anything if the qualification is not eventually obtained. This is outside the scope of the current study. Table 3-1 lists characteristics of informal learning, adapted from Yaşar and Karadeniz (2011):

Table 3-1: Characteristics of informal learning

Characteristics of Informal Learning	
Just in time:	Informal learning often occurs at the time of need and is often triggered by the question *How to*, leading to new learning experiences.
Contextual:	This type of learning happens “in the context where the information, knowledge or skill is needed” (Yaşar and Karadeniz, 2011).
Individualised:	Learners learn at their individual pace and they learn what they need.

Characteristics of Informal Learning	
Personal:	The learner tends to get the knowledge from the people whose prior knowledge and skills they know and trust.
Chunked:	Learning does not go on for long periods; rather those involved can learn in a short space of time, ranging from seconds to a few hours.

In the next section, the focus shifts to the types of informal learning, as research suggests that informal learning can take on many forms (Schugurensky, 2000).

3.3.2 Types of Informal Learning

In a study conducted by Schugurensky (2000), he concludes that informal learning could take on three forms, namely Self-directed learning, Incidental learning and Socialisation learning. In his study he used two categories to classify how informal learning takes place, namely intentionality and consciousness on the side of the learner when learning occurs. Table 3-2 adapted from Schugurensky (2000) depicts the three forms of informal learning under the intentionality and consciousness classification.

Table 3-2: Types of informal learning (Adapted from Schugurensky (2000))

Type	Intentionality	Consciousness
Self-directed	True	True
Incidental	False	True
Socialisation	False	False

Rogers (2014) agrees with Schugurensky (2000) that informal learning takes on three forms. To look at informal learning as a single process would probably be incorrect. Rogers (2014) lists the following as the three forms of informal learning:

(1) **Self-directed learning**: In this form of learning, activities are both organised and controlled from the learner's side; the learner decides to learn something without being assisted by another person, i.e. teacher, parent etc. (Schugurensky, 2000). The

learner has an intention to learn something; and when there is an intention to learn, success of learning has to be measured. The learner takes what and how much has been learnt and uses it to measure success; the learner is conscious of what has been learnt]. However, Gikas and Grant (2013) suggest that although there is usually an intention to learn, the methods and ways to learn are usually “unstructured and contextualized”.

(2) **Incidental learning:** The learners are engaged in a task; there is no intention to learn. However, as they complete the task they pick up that they have actually learnt something although it was not the intention. Regarding incidental learning, Marsick and Watkins (2015) seem to agree with both Schugurensky (2000) and Rogers (2014) as they argue that incidental learning is a "sub-category" of informal learning. They add that incidental learning is actually a "by-product of another activity". To clarify this, Schugurensky (2000) uses a very simple example, yet something that many people can relate to. The example is that of a toddler touching a hot iron while playing without knowing that it is hot. The intent is obviously not to test whether the iron is hot and will burn the child. The latter is involved in a task of playing but in the process the child learns that touching hot iron burns and will probably not do it again.

(3) **Unintentional learning**: Interestingly, Rogers (2014) uses this term to describe the third form of informal learning. It is difficult to measure success with this kind of learning. According to Schugurensky (2000), "the awareness that an unintentional and unconscious learning experience has taken place (through socialisation) could occur immediately after the learning experience or many years after it, and the process of retrospective recognition can be internally generated or externally led". In explaining this type of learning, Gikas and Grant (2013) conclude that it is often “unanticipated, unorganized” and at times even unacknowledged by the learner. Finally Clough (2010), in classifying the types of informal learning, points out “intentional, self-directed, unintentional or tacit” as three main forms of informal learning and argues that this classification is justified by the ideology that informal learning depends on “learners’ choices”. In their study Yakin and Gencel (2013) conclude that informal learning takes place whenever “conversations, reading, watching TV, observing the world, experiencing an accident, or embarrassing situation, observation, trial and error,

asking for help, listening to stories, reflecting on a day's events, or stimulated by general interest" are present.

3.3.3 Theme 1: Summary

Theme 1 of the literature review is summarised in Table 3-3 below.

Table 3-3: Summary of theme 1

Theme 1: Summary	
What is learning?	Learning is a lifetime activity and an integral part of human existence (Driscoll, 2005). Marsick and Watkins (2015) define learning as "the way in which individuals or groups acquire, interpret, reorganize, change or assimilate a related cluster of information, skills and feelings. It is mainly the way in which humans construct meaning in their lives".
Formal vs. informal learning	In the literature the researcher came across two forms of learning, namely formal and informal learning. There is, however, a debate among scholars in defining these two forms of learning. According to Yoo and Kim (2013) purpose, process of learning, location / context and content are some of the categories scholars use to contrast and compare formal and informal learning. Scholars agree that with formal learning the purpose of learning is clearly defined and is intentional, whereas for informal learning the process of learning is casual, unintended and sometimes not recognised. Still regarding the purpose of learning, another distinct feature is that formal learning is curriculum-based while informal learning is self-determined, based on a community of interest. Furthermore, for "process of learning" category, scholars agree that formal learning is teacher-initiated/led, supported by the teacher with formal assessments, and is predominantly text-based. However, informal learning is incidental, spontaneous, experiential, and self-regulated − relying on peer support. Informal learning is based on various tools, such as social networks, images, videos and the internet. Regarding the "location/context" category, scholars agree that formal learning occurs mostly at a formal institution; it has a time restriction and milestone/learning objectives clearly cut out, there is usually a certificate granted on completion. On the contrary, with informal learning, there is not a set environment, it happens anywhere although social media seems to be providing a good ground; learning objectives are not defined as the learning is tightly integrated to day-to-day activities. Finally, regarding content, formal learning focuses on acquiring knowledge compared to informal learning that focuses on everyday experiences.

Types of informal learning	There are three types of informal learning: • Self-directed (learner has intention to learn and is conscious of learning taking place) • Incidental learning (there is no intention to learn; however, when learning takes place the learner is conscious of its occurrence) • Socialisation (the learner has neither the intention nor the consciousness to learn; however, learning still occurs).

In the next section the researcher focuses on social media, how and why children use social media and the risks associated with using social media.

3.4 THEME 2: SOCIAL MEDIA

3.4.1 What is Social Media?

The term *social media* is not a new phenomenon; its origins go as far back as the late 1950s (Kaplan and Haenlein, 2010). However, there is still debate among scholars and people in general on what the term really entails (Kaplan and Haenlein, 2010), with many using it interchangeably with terms like Web 2.0 (Gikas and Grant, 2013; Dabbagh and Kitsantas, 2011) and social networking sites. In order to have a full understanding of the term *social media*, which is used mainly for the purposes of this research, it is imperative that the other two terms, *Web 2.0* and *Social networking sites* are defined to understand the difference between them.

According to Grosseck (2009), *Web 2.0* refers "to the social use of the Web which allows people to collaborate, to get actively involved in creating content, to generate knowledge and to share information online". When the term *Web 2.0* was first used in 2004, the idea was mainly to explain a concept of how software developers and end users were starting to utilise the world wide web (also known as the Internet) (Kaplan and Haenlein, 2010). Social network sites are defined as "as web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system" (Boyd and Ellison, 2007). Social media is defined as "a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0,

and that allow the creation and exchange of User Generated Content" (Kaplan and Haenlein, 2010). By definition, there are certainly common themes between the terms and one can somehow sense that there is a relationship, i.e. the technological foundation for Social Media is Web 2.0 and the sharing and creation of user-generated content happen through social networking sites (not the sole medium). Dabbagh and Kitsantas (2011), in supporting this idea of the relationship between these terms, define social media as “a 21st century term used to broadly define a variety of networked tools or technologies that emphasize the social aspects of the Internet as a channel for communication, collaboration, and creative expression”. Kaplan and Haenlein’s (2010) definition has been adopted as the social media definition for the current study.

A key feature of social media sites is that they allow social interaction. Under the umbrella term *social media*, one finds social networking sites (Facebook, Twitter and MySpace, etc.), media or content sharing sites (Flickr, YouTube, etc.) and virtual worlds such as Club Penguin (O'Keeffe et al., 2011). The current study focuses on the media or content sharing site YouTube. When the term *social media* is used hereafter, it is in the context of YouTube.

In the next section, the researcher focuses on YouTube as a social media platform.

3.4.2 YouTube as a Social Media Tool

YouTube is considered as an online "video repository offering family entertainment channels" (Buzzi, 2012). Used effectively and efficiently, videos can be a powerful educational tool (Duffy, 2008). Baumer (2018) suggests that YouTube contains information about almost anything and its availability 24/7 gives it popularity with students (Almobarraz, 2018). YouTube is a Google company, following its acquisition in 2006. Founded by Chad Hurley, Steve Chen and Jawed Karim in February 2005 (Gill et al., 2007) and with its launch in May of the same year, YouTube has attracted over a billion users, which accounts for about a third of all the people on the Internet (YouTube, 2005). According to Burlington (2016), YouTube has become the most popular video sharing website in the world since its inception in 2005. Interestingly and not so surprisingly, among the billion users, the number of children users is also

growing at a fast rate (Eickhoff and De Vries, 2017). YouTube is classified as a social media site, based on its ability to allow users to share content and to comment on shared content using Web 2.0 technologies.

The initial idea of YouTube was to allow its users to "watch and share originally-created videos" (YouTube, 2005). However, the facility has since added additional features to "facilitate social networking among its users" (Gill, Arlitt, Li, and Mahanti, 2007) with Duncum (2011), suggesting that YouTube's ability to facilitate social networking is one of its cleverest designs. The social networking ability allows users to comment on shared content (Eickhoff and De Vries, 2017). This combination of sharing content and having the ability to comment on the shared content seems to be one of the most appealing features of YouTube (Eickhoff and De Vries, 2017). "Every posted video is shown with a wealth of related materials to enable viewers to choose to spend a few minutes downloading a particular video rather than choosing from numerous others" (Duncum, 2011). For example, as depicted in Figure 3-3, each video shows the date it was uploaded on the YouTube platform, how many people have seen or watched the video, the number of people who voted "like" and "dislike" for the video as well as all the comments the viewers left (Duncum, 2011). "A video with thousands of visitors, especially if the likes greatly outnumber the dislikes is likely to attract more visitors than a video with only a few hundred visitors" (Duncum, 2011).

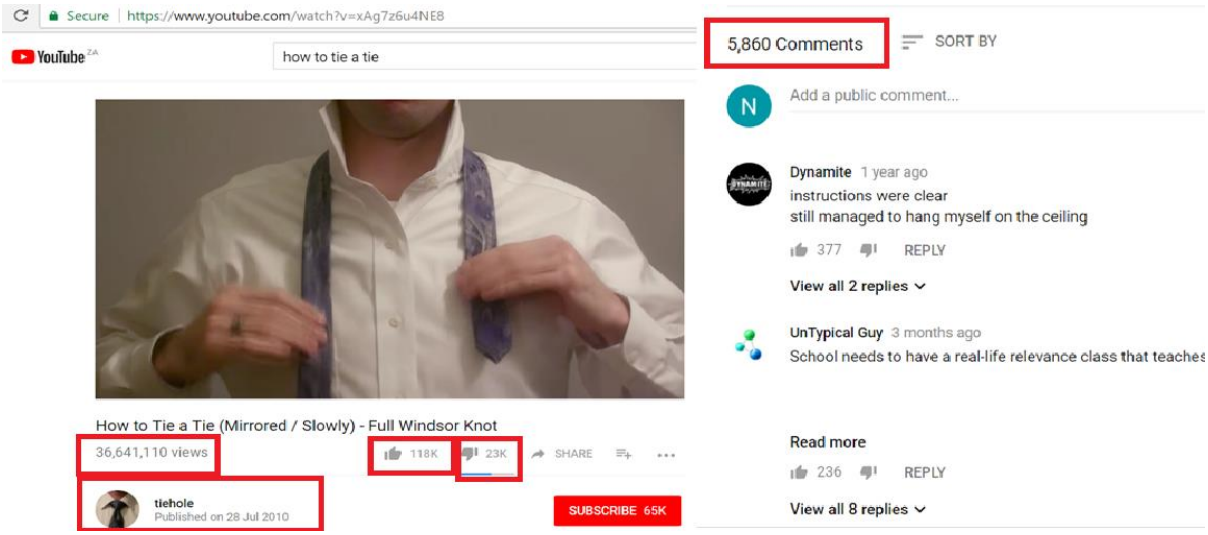

Figure 3-3: How a video search is displayed on YouTube

Another key feature of YouTube is that the platform differentiates between registered and unregistered users in terms of what the user can do. Registered users are able to "upload movie clips, television clips, music videos, original short videos, documentaries, animated shorts, slideshows, as well as video captured via mobile devices" (Buzzetto-More, 2014) over and above watching videos which is the only service available to unregistered users. Tynes (2007) refers to YouTube as the "newer social networking site" that has taken teens by storm due to its functionality that allows them to view and upload videos.

YouTube is generally considered a place of entertainment, a platform where both young and old would generally hang out to have fun (Lange, 2014). However, due to its notable educational benefits, more and more academic institutions are embracing it, using it to create special YouTube channels that contain educational videos (Othman, 2018). This has led to YouTube launching an educational service, known as YouTube/EDU, which includes a compilation of the education videos produced by academic institutions (Fleck, Beckman, Sterns, and Hussey, 2014). The fact that "videos in general are an easier educational tool" than printed material has led to many considering YouTube in the context of education (Megaly, Khalil, Tadros, and Tawadros, 2016). YouTube is one of the most used video sharing social media platforms by educational systems as it offers access to new and dynamic opportunities of teaching and learning (Almobarraz, 2018). In a study conducted by Othman (2018) using a SWOT analysis to understand "YouTube as Engagement and Learning Tool in Higher Education Society" strengths, weaknesses, opportunities and threats of using YouTube as a learning tool are highlighted. Some of the strengths, weaknesses, opportunities and threats that stood out in respect of the current study are highlighted in Table 3-4:

Table 3-4: YouTube as a learning tool: SWOT Analysis (Adapted from Othman (2018))

YouTube as a Learning tool: SWOT Analysis	
Strengths:	**Opportunities:**
• Enhances e-learning through an enormous amount of free public videos.	• Development and integration of educational YouTube channels for formal learning environments.

YouTube as a Learning tool: SWOT Analysis	
• Allows learners to create educational interaction based on comments posted on the various videos. • Ability to learn anytime, anywhere, with no restrictions. • Promotes self-learning and self-reliance. • Learners are able to learn at their own pace through the ability to play, replay and pause while they are watching a video.	• Presentation of the educational videos designed for formal learning environments across the globe in different languages.
Weaknesses: • Inappropriate content that keeps popping up, even if it is unrelated to the content being searched. • The enormous number of videos available may be disruptive, especially if intention of use is self-directed learning.	***Threats:*** • Lack of control over the content that can be uploaded on YouTube poses risks, including exposure to inappropriate content, particularly for children. • Content posted is not subject to copyright law. • Learners who have low self-regulation may be addicted, which will have an impact on their learning.

3.4.3 Social Media as an Informal Learning Tool

Unintentional and self-directed learning are important elements of learning regarding social media (Dabbagh and Kitsantas, 2011). As suggested by Dabbagh and Kitsantas (2011), not only is informal learning becoming a critical element of education for learners at all stages, but there is also substantial evidence that confirms, "Social media is increasingly supporting informal learning at home and in the community". Yoo and Kim (2013) agree to Dabbagh and Kitsantas's view, suggesting that social media is increasingly being used as a tool for developing both formal and informal learning spaces or experiences. According to Latchem (2014), "technology-enhanced informal

learning is an integral part of children's education as it not only develops technical knowledge and skills but is constructivist (enabling them to reflect upon and construct their own understanding of the world), experiential (involving behavioural and affective as well as cognitive dimensions) and situated (joining and learning from online communities through social media)". Whether the need is to address a problem at school, work or home, or even just to satisfy their curiosity, it is evident that learners are in a constant search for information and to find solutions they take advantage of the social media world (Dabbagh and Kitsantas, 2011). In the literature, informal learning is often linked to Information Communications Technology, Web 2.0 and social software (Yakin and Gencel, 2013). Informal learning, according to Yakin and Gencel (2013), is a by-product of social activities and these could be anything from families, communities, leisure activities and even the web as it has transformed into a social platform. Latchem (2014) agrees, stating that "most people's learning throughout their lifespans is informal, occurring in family, community and work settings". Many young people regard social media as a learning tool outside of school (Greenhow and Robelia, 2009b).

There is evidence in literature that YouTube has a potential to be used as informal learning tool with some people already exploring the benefits. As suggested by Clifton and Mann (2011), "YouTube is an established social software, having millions of users and is already being used as both an informal and formal learning tool by many". Latchem (2014) agrees with Clifton and Mann, stating "YouTube has matured into one of the biggest resources for educational content ever". Baumer (2018) refers to YouTube as a "multi-voiced and multifarious tool for informal learning." According to Tan (2013), an informal learning environment is characterised by attributes such as "open-ended, non-threatening, enjoyable and explorative". Another key feature of an informal learning environment is that it should be both "educational and enjoyable" (Tan, 2013).The attributes of an informal learning environment cited by Tan can be applied to YouTube as listed below:

(1) Open-ended: Anyone can access it. If one does not have an account, one can still view videos as a guest.
(2) Non-threatening: Anyone can access it from the comfort of a chosen environment.

(3) Enjoyable and explorative: The main reason people and children use YouTube is for entertainment.

(4) Educational: “YouTube is beneficial for students as a learning tool, as well as being an effective tool for teaching common skills and tasks in a formal setting or in the home” (Almobarraz, 2018).

Furthermore, the freedom to express oneself, in an uncontrolled environment with little or no editorial process on the uploaded content, makes YouTube an appealing medium for informal learning (Burlington, 2016). The ability to create and view content with minimal barriers is another feature that makes YouTube a useful resource for informal learning (Burlington, 2016).

3.4.4 Theme 2 Summary

For this theme, the researcher explored the current literature to understand what social media is, YouTube as a social media tool and social media as informal learning platform. A summary of the findings is presented in Table 3-5:

Table 3-5: Summary of theme 2

Theme 2: Concluding Summary	
What is social media?	There are many definitions of social media in literature; however, for this study the researcher adopted the definition of Kaplan and Haenlein (2010). They define social media as "a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, and that allow the creation and exchange of User Generated Content".
YouTube as a social media tool	The initial idea of YouTube was to allow its users to "watch and share originally-created videos" (YouTube, 2005). However, they have since added additional features to "facilitate social networking among its users" (Gill et al., 2007). YouTube’s ability

Theme 2: Concluding Summary	
	to facilitate social networking is one of its cleverest designs. The social networking ability allows users to comment on shared content. Although the initial of idea of YouTube was entertainment, the academic community sees opportunities for learning on YouTube.
Social media as an informal learning tool	YouTube provides its users with the freedom to express themselves, in an uncontrolled environment with little or no editorial process on the uploaded content, making YouTube an appealing medium for informal learning (Burlington, 2016). The ability to create and view content with minimal barriers is another feature that makes YouTube a useful resource for informal learning (Burlington, 2016). Not only is informal learning becoming a critical element of education for learners at all stages, but there is substantial evidence that confirms that "social media is increasingly supporting informal learning at home and in the community" (Dabbagh and Kitsantas, 2011).
Implications for research	
Social media tools like YouTube are receiving all the more attention as they continue to show potential in supporting learning, both formal and informal. By exploring how and why children use social media, the researcher aims to understand the benefits of using YouTube as informal learning tool for children aged 11 to 13 years.	

In the next theme, the researcher looks at children and social media use, covering the *why* and *how* children use social media and risks associated with its use.

3.5 THEME 3: CHILDREN AND SOCIAL MEDIA USE

One of the most common activities among children and adolescents these days is the use of social media sites (O'Keeffe et al., 2011). According to Greenhow, Robelia, & Hughes (2009), nearly ninety per cent of school-going children are active Internet users with adolescents − children aged 10 to 17 years − being among the fastest growing user group.

3.5.1 Children's use of social media: The *why* and the *how*

There are many reasons why children use social media. However, the first question to ask is, "Why do they sign up or create profiles in social media sites in the first place?" According Boyd (2008), teenagers are drawn to social media sites because "their friends are there" and these sites are seen as a place to "hang out". Having a social media profile has become the new "cool" among high school learners. Added to the social aspect of using social media, there are its educational uses as well as Subrahmanyam and Lin (2007) suggest: "Among adolescents, the Internet has become indispensable for instrumental purposes such as school work and information gathering, as well as for communication purposes". Moreover, the increase in the availability of mobile devices among children has accelerated the rate at which young people sign up for social media sites. In a study, cited by O'Keeffe et al. (2011), "75% of teenagers own cellular phones and 25% use them for social media; 54% use them for texting and 24% use them for instant messaging". Four years later, the Pew Research Center (2015) conducted a study on the use of social media by teenagers and their results prove that there is a steady increase in the ownership and use of social media by children every year. In their study, they discovered that "88% of American teens aged 13 to 17 had or have access to a mobile phone of some kind". In the 13- to 14-year-old age group, 68% reported owning a smartphone. It is also a fact that many current smartphones come with preloaded social media site apps like Facebook, Twitter and YouTube. Therefore, even if the intention is not to sign up or create a profile on a social media site, curiosity might just get the better of this target group. Clark, Logan, Luckin, Mee, and Oliver (2009) concur that there is a rapid

increase in the use of technology by children, together with an increase in the number of technology access enabling devices available to them.

3.5.2 Risks associated with social media use

Although social media provides many benefits as a learning tool for all age groups, it is also important to note that it does have some limitations and poses certain risks and security concerns to its users, with children being the most vulnerable. Kritzinger (2014) agrees, arguing that even though it is important that the major benefits associated with ICTs and internet usage are promoted, it must be done in a proper and safe manner. She further posits that the use of ICT tools exposes its users to cybersecurity risks and school learners are more vulnerable to dangers such as revealing personal information that may be compromising; they can be easily exposed to content that is not appropriate for their age group.

Several studies have been conducted in the recent past, both abroad and within the South African context on the risks faced by children while using ICTs. Two studies conducted abroad that are of interest to the current one are the studies conducted by Livingstone and Haddon (2009) on EU (European Kids Online) and the study conducted by Clifton and Mann (2011) in determining whether YouTube can enhance student nurse learning. In their study, Livingstone and Haddon (2009) reveal that the most common risky behaviour among children using the Internet is giving out personal information to unknown people. In order of ranking, this is followed by encountering pornography online and in third place is exposure to violent or hateful content. Online bullying is fourth in the ranking of risky behaviours encountered by children online, followed by receiving sexual comments. Surprisingly Livingstone and Haddon (2009) identified meeting an online contact offline as one of the most dangerous. Table 3-6 adapted from Livingstone and Haddon (2009) lists both the opportunities and risks encountered by children using social media.

Table 3-6: Opportunities and risks encountered by children online (Adapted from Livingstone and Haddon (2009))

		Content: Child as recipient	Contact: Child as participant	Conduct: Child as actor
OPPORTUNITIES	**Education learning and digital literacy**	Educational resources	Contact with others who share one's interest	Self-directed and collaborative learning
	Participation and civic engagement	Global information	Exchange among interest groups	Concrete forms of civic engagement
	Creativity and self-expression	Diversity of resources	Being invited and inspired to create or participate	User-generated content creation
	Identity and social connection	Advice (personal / health / sexual etc.)	Social networking and shared experiences with others	Expression of identity
RISKS	**Commercial**	Advertising, spam, sponsorship	Tracking and harvesting of personal information	Exposure to gambling, downloading content illegally and hacking
	Aggressive	Violent / gruesome / hateful content	Being bullied, harassed and stalked	Bullying, harassing or stalking others
	Sexual	Pornography / harmful sexual content	Contact with strangers and being groomed	Creating and uploading pornographic material
	Values	Racism, biased information and advice e.g. drugs	Self-harm and unwelcome persuasion	Providing advice i.e. suicide or pro-anorexia

While Livingstone and Haddon (2009) focus on risks pertaining to the safety of children on the Internet, Clifton and Mann (2011) focus more on the content of what is being viewed online. One of the concerns they raise is the idea that the content on YouTube is user-generated with no quality regulation and therefore the user needs to be aware of its authorship as content duplication and illegal uploads are prevalent. Another potential risk pointed out by Clifton and Mann (2011) is that the content may be biased and some users are unable to identify the bias in the information, due to lack of information; this can be very true for children using YouTube. Being Internet savvy is a prerequisite; in order to get value and to be able to filter information from YouTube, one must be able to navigate and search for the information. As suggested by Latchem (2014), “Informal learner experiences of and attitudes to educational technology need to be considered from cultural and generational perspectives”. As part of the current study, the aim of the researcher is to discover whether the participants are equipped to filter out relevant from irrelevant and unsafe from safe information while navigating on YouTube.

In the South African context two studies were conducted in 2014, one by Walaza et al. (2014) on “A Framework to integrate ICT awareness into the South African schooling system” and another one by Kritzinger (2014) on “Online safety in South Africa – a cause for growing concern”. Both studies highlight the vulnerability of school learners to cyber threats. According to Von Solms and Von Solms (2014), curiosity and enthusiasm to explore new technologies and environments are just some of the factors that make children more vulnerable to cyber threats.

Regarding the issue of potential risks that children may experience while using social media, it is clear in the literature that parents and even schools prefer to solve this problem by blocking access to social media sites. A study conducted by Tynes (2007) confirms this idea, suggesting that many parents and educators choose to block certain sites and Internet applications using filtering software because of their fear of what children may be exposed to on social media. Von Solms and Von Solms (2014) agree, stating that in most cases people have the belief that through the implementation of filtering software that restricts children’s access to social media, the potential risks can be eliminated. However, besides the fact that children sometimes do find ways to bypass the filtering software the Internet will just ”never be completely safe” (Von Solms and Von Solms, 2014). Tynes (2007) suggests that perhaps it is ideal that parents use their children as first line of defence in these situations. Kritzinger (2014) agrees with Tynes, suggesting that children should be educated and equipped with tools and the necessary skills on how to protect themselves while surfing the Internet. Parents can equip the children on how to deal with safety issues and give them room to develop their own strategies for dealing with issues of safety on the web. Tynes (2007) suggests the following strategies as key in encouraging safe Internet practice:

- Maintain open and honest dialogue. Adults should engage in frank discussions with the children about the risks associated with the use of social media. According to Von Solms and Von Solms (2014), the practice of parents to have discussions with their children about how not to talk to strangers or walk in unsafe places should be extended to safe practices in the digital world.

- Help youths protect their privacy online. Adults should learn and understand the different safety features (like blocking certain people) offered by most social media tools and share these with the children.
- Develop an exit strategy. Adults should constantly work out strategies with the teens on when to terminate a viewing session.

3.5.3 Theme 3: Summary

Table 3-7 is a concluding summary for Theme 3.

Table 3-7: Summary of theme 3

Theme 3: Concluding Summary	
Why children use social media	Children use social media to hang out (because their friends are there); they use social media to communicate and network; they use it to play games and for school-related projects.
How children use social media	Most children own a mobile device and they use it to connect to social media. Some children use their parents' devices or connect to the Internet from the home computer while some children connect to the Internet at school.
Risks associated with social media use	Using social media comes with both benefits and risks. The following have been identified as some risks that children are exposed to online: • Giving out personal information to strangers. • Exposure to pornographic material. • Exposure to violence and hateful behaviour. • Online bullying. • Receiving sexual comments. • Meeting online contacts offline.

Theme 3: Concluding Summary	
	• Inability to filter illegitimate from legitimate content.
Implications for research	
Understanding why and how children use social media, particularly YouTube, is an important consideration for this current study. Furthermore, the researcher attempted determine which of the five Social Cognitive Theory elements [Self-regulation, outcome expectations, self-efficacy, observational learning and reinforcements] are at play when children use YouTube.	

3.6 CONCLUDING SUMMARY

The literature was broken down into three themes, namely (1) Informal learning, (2) Social media, and (3) Children and social media use. From the literature review, it is evident that informal learning is a concept that cannot be ignored as it forms part of people's daily lives. What is also clear is that whether informal learning is recognised or not, it does still take place, intentionally and unintentionally so. Many studies continue to prove that social media is taking over people's lives. Children are among the most active users of social media. Many reasons, ranging from entertainment to connecting with friends or learning are cited as reasons for children's love of social media. While the dangers present in the use of social media, particularly for children, cannot be over emphasised, it is also important that the learning opportunities offered be optimised.

4 CHAPTER 4: RESEARCH METHODOLOGY

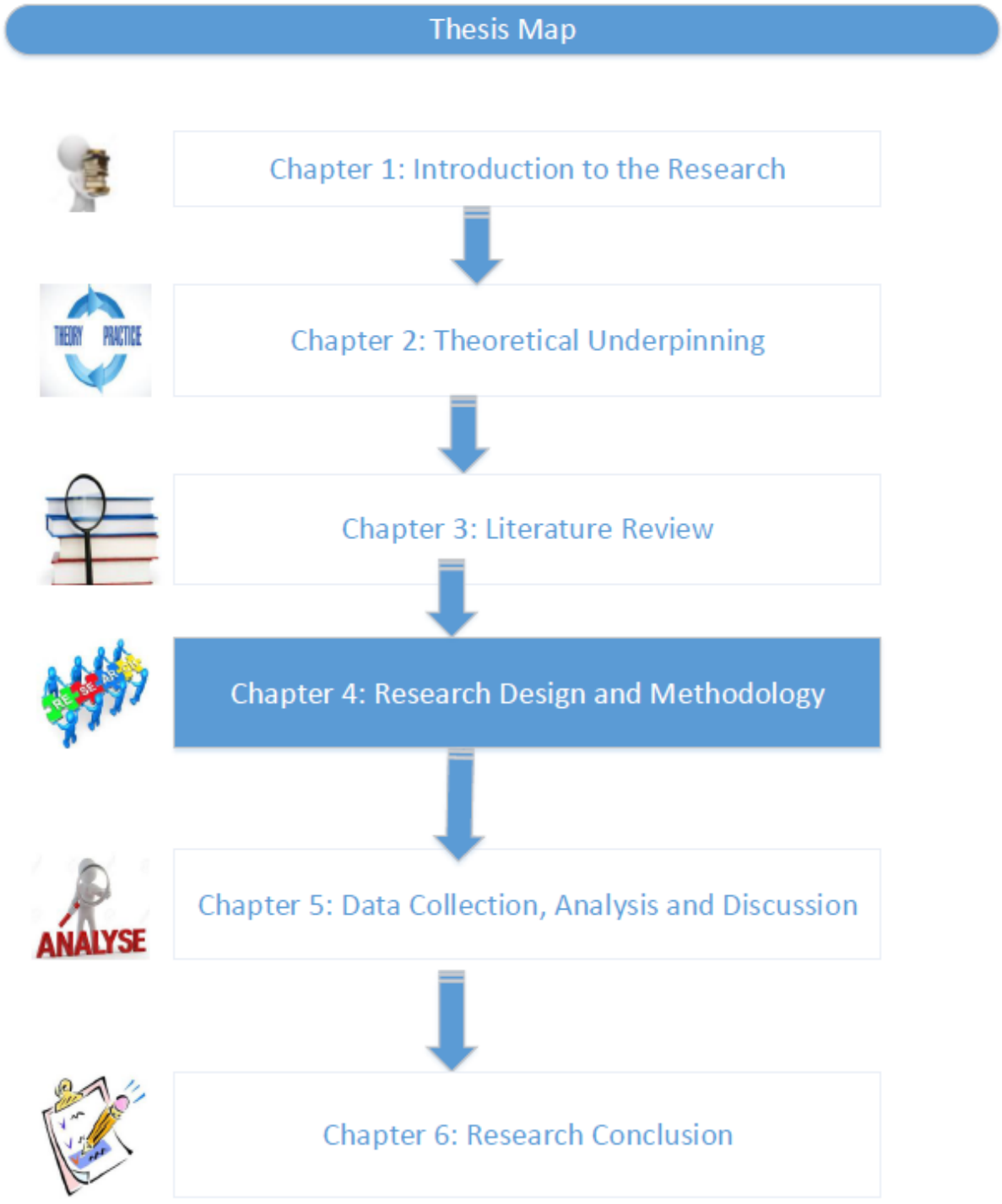

Figure 4-1: Thesis map

4.1 INTRODUCTION

As stated in Chapter 1, the purpose of this study is to understand how children aged 11 to 13 years benefit from using YouTube as an informal learning tool. In Chapter 3 the researcher outlined the literature study relating to informal learning and how children use social media as an informal learning tool. In Chapter 4 the researcher discusses the research methodology or research design, including the data analysis and data collection tools that were adopted in order to achieve the objectives of the research.

4.2 RESEARCH CHOICE MODEL

The research onion of Saunders, Lewis, and Thornhill, (2009) depicted in figure 4-2 guided the explanation of the research design of the present study. The research onion breaks down the research design into six layers, as in an onion. The outer layer is philosophy, followed by approaches, strategies, choices, time horizon, and techniques and procedures as the last inner layer. In the kitchen generally one would discard the first layer of the onion after peeling it; however, in research this outer layer of the onion is like a root and a very crucial building block of an appropriate research design (Sahay, 2018). The six layers of the research onion are briefly described below:

- **Philosophies**: The stance of the researcher on the meaning and nature of reality (ontology) and "how the researcher knows what he or she knows" (epistemology) (Creswell, 2007). According to Saunders et al. (2009), there are four main philosophical paradigms: Positivism, Realism, Interpretivism and Pragmatism.
- **Approaches**: This layer of the onion is crucial in the research in that it determines how the research project is carried out. Deductive and inductive reasoning are the two main research approaches (Saunders et al., 2009).
- **Strategy**: In this layer the researcher details how he or she answered the research question(s) (Myers, 2013). According to Saunders et al. (2009), there are seven main research strategies, namely surveys, experiments, case studies, action research, grounded theory, archival research and ethnography.

- **Choices: T**he decision made by the researcher to use either qualitative or quantitative techniques and procedures, or integrating the two is known as the research choice. Saunders et al. (2009) suggest three research choices, namely the mono-method, multi-method and mixed methods.
- **Time horizons**: The period in time over which the research is undertaken. Cross-sectional and longitudinal time horizons are the two main time horizons according to Saunders et al. (2009).
- **Techniques and procedures**: This last layer refers to the ways in which the researcher plans to collect and analyse the collected data (Saunders et al., 2009).

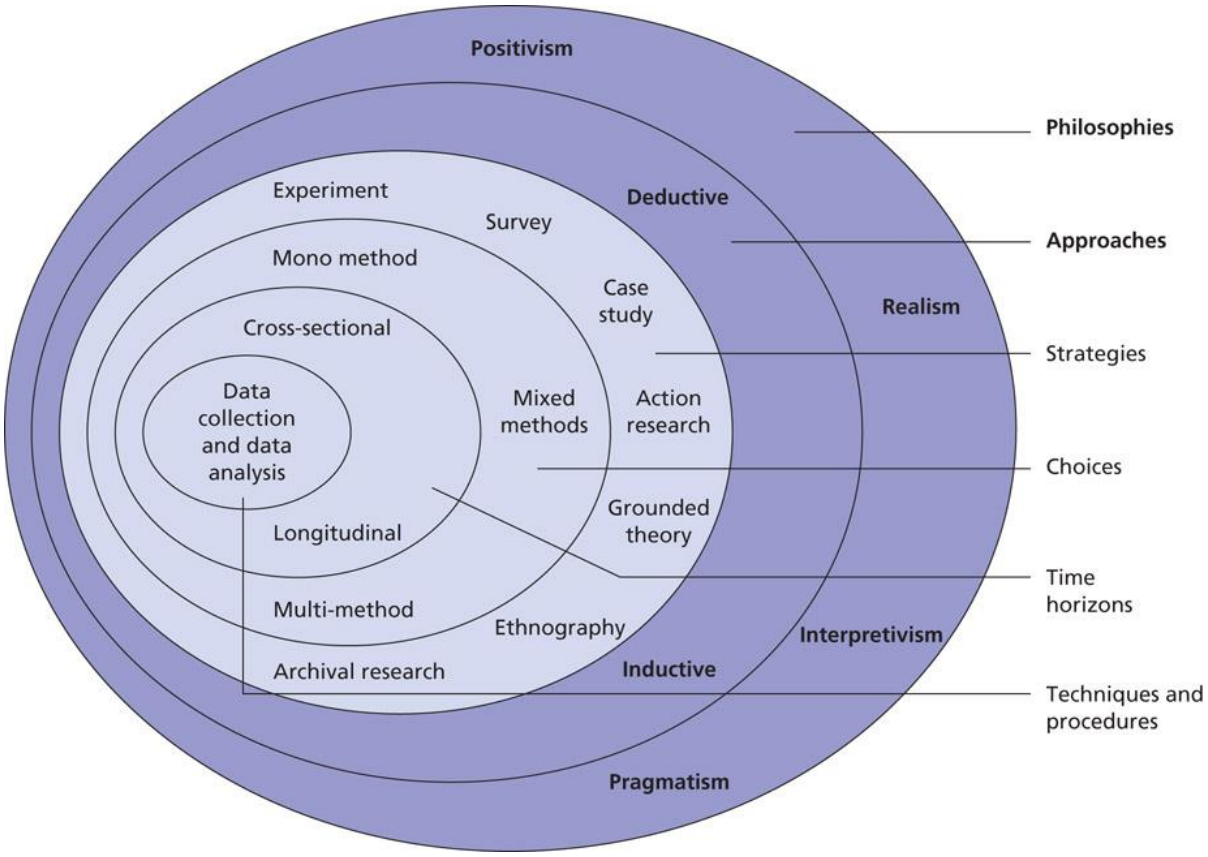

Figure 4-2: The Research Onion model (Adapted from Saunders et al., 2009)

The different layers of the onion as they apply to the current study are discussed in detail in the next section.

4.3 RESEARCH DESIGN

“Research design is about making choices and articulating a rationale for the choices one has made” (Schwartz-Shea and Yanow, 2012). Bhattacherjee (2012) defines Research Design as a “comprehensive plan for data collection in an empirical research project”. De Vaus (2001), however, challenges this definition, arguing that it is a very common mistake that researchers regard research design merely as a data collection method “rather than as a logical structure of inquiry”. In his analysis, De Vaus (2001) uses the analogy of a building project to explain the significance of what research design is and most importantly, what it is not. De Vaus (2001) argues that “when constructing a building there is no point ordering the materials or setting critical dates for the completion of project stages until the builders know what kind of a building is being constructed”. He argues that researchers need a research design or structure before data analysis or data collection can commence. According to De Vaus (2001), the main function of the research design is to enable researchers to ensure that the evidence obtained is relevant in answering the initial research question as unambiguously as possible. The scope and nature of the problem of the proposed study influence the choice of the research design (Matsimbi, 2016). For the current study, the researcher adopted the definition of research design as articulated by Schwartz-Shea and Yanow (2012). They refer to research design as “the basic structure of a research project, the plan for carrying out an investigation focused on a research question that is central to the concerns of a particular epistemic community”. Figure 4-3 below depicts the research design adopted for the current study.

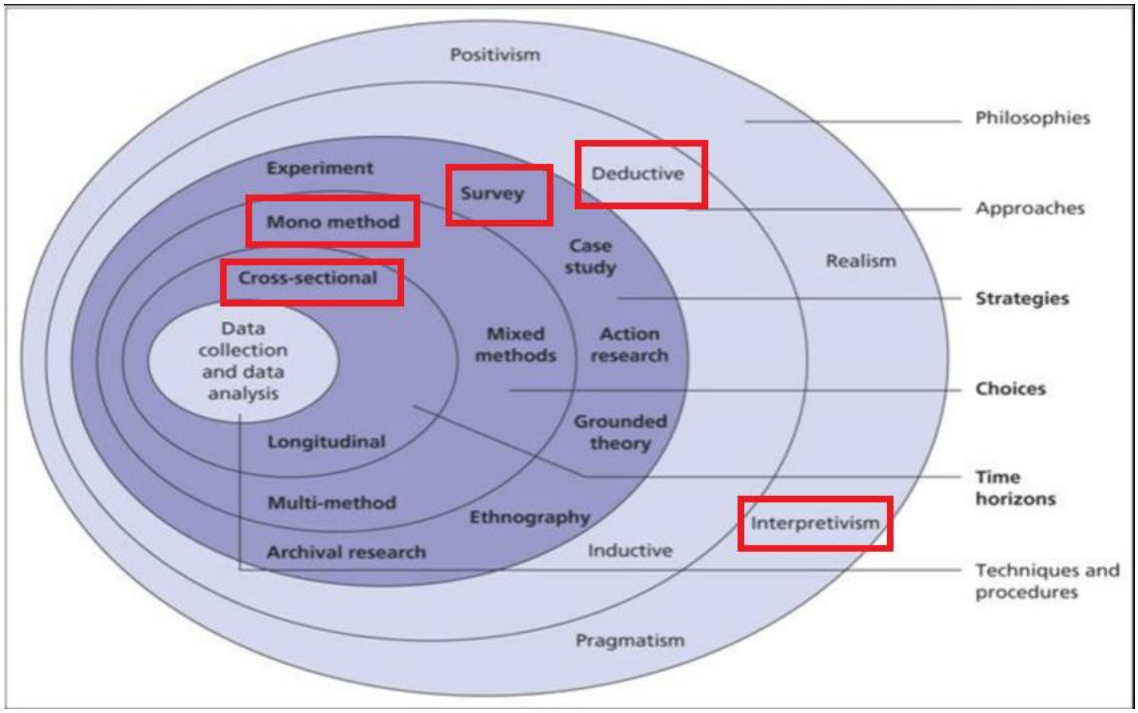

Figure 4-3: Research design (Adapted from the research onion by Saunders et al. (2009))

In the next section, the researcher discusses the research philosophy adopted for the current study.

4.3.1 Research Philosophy

"Our mental models or frames of references that we use to organise our reasoning and observation shape the way in which we design and conduct research" (Bhattacherjee, 2012). These belief systems are also known as paradigms (Bhattacherjee, 2012). The word *paradigm* is often used interchangeably with the words *philosophy* or *philosophical perspectives* (Myers, 2013) or is sometimes used in conjunction, such as Oates's (2006) describing it as "philosophical paradigm". Oates (2006) defines a paradigm as a "set of shared assumptions or ways of thinking about some aspect of the world". Research philosophy is such a crucial element of research design, with (Myers, 2013) boldly stating that not even one research project is not based on some sort of philosophical paradigm. Poni (2014) supports Myers, arguing, "Research paradigms represent a crucial element in the research project as they influence both the strategy and the way the researchers construct and interpret the meaning of the reality". Ontology and epistemology make up research philosophy

(Graue, 2015). According to Guba and Lincoln cited in Shanks (2002), a paradigm is made up of three dimensions:

(1) Ontological question: How does the researcher see the world (the form and nature of reality)?

(2) Epistemological question: How does the researcher choose to gain the knowledge about reality?

(3) Methodological question: How can the researcher determine if what he or she believes can be known.

Placing a research project within a "paradigmatic framework" encourages researchers to reflect on and think about their ontological and epistemological views (Ponelis, 2015). Although Wang and Zhu (2016) acknowledge that there are "many research paradigms" in the research field, Myers (2013) suggests four research paradigms, namely positivism, post-positivism, critical theory and constructivism. Oates (2006), on the other hand, focuses on three important philosophical paradigms, namely positivism, interpretivism and critical paradigms. Of these paradigms, "positivism is the oldest" (Oates, 2006) and is often compared to the interpretivist paradigm (Phothongsunan, 2010). Bhattacherjee (2012) states that positivism and post-positivism are the most popular paradigms. These paradigms are differentiated mainly by two factors, namely (1) the ontological view of the researcher (i.e. how does the researcher view the world?) and (2) the epistemological view (how does the researcher go about acquiring that knowledge about the world) (Oates, 2006).

Positivism is a very well known and established research paradigm in the academic research field across the globe (Taylor and Medina, 2013). This paradigm is rooted in the ontological assumption that truth and reality can be observed freely and independently of the observer and viewer (Aliyu, Bello, Kasim, and Martin, 2014). Furthermore, the researcher controls the research process and is external to the research site (Taylor and Medina, 2013). The methodological position of the positivistic paradigm is based on the premise that the hypotheses generated from general theories should be subject to empirical testing that can be replicated and tested to provide opportunity for confirmation or falsification of the hypothesis (Shanks, 2002). On the contrary, the interpretivist paradigm has its origins in a study of interpretive understanding known as *hermeneutics* conducted by Edmund Husserl, Wilhelm

Dilthey and other German philosophers in 1989 (Mackenzie and Knipe, 2006). Interpretivism is on the other extreme of positivism. The foundational belief of interpretivism is that the construction of reality is formed by social actors and how people perceive it (Dina, 2012). In this paradigm, the inquirer and the inquired cannot be separated.

For this study, the researcher chose to follow the interpretivist paradigm. Bhattacherjee (2012) argues that when a researcher is of the view that the best way in which to study the world is by getting the views of different participants through interviews and then subjectively analyse the different responses through one's own perspective; thus the researcher has adopted an interpretivist paradigm. Akhter et al. (2015) agree with Bhattacherjee, stating that if the main aim of the researcher is to investigate human behaviour, the experiences and activities of a group of people in a particular setting, interpretivism is the most appropriate paradigm to use. Unlike positivists, Interpretivists are not concerned about proving or disproving a hypothesis (Oates, 2006); rather their focus is on viewing "the world through the perceptions and experiences of the participants" (Thanh and Thanh, 2015). Interpretivism is based on the premise that there is no single version of reality, but rather that reality is constructed by social settings (Thanh and Thanh, 2015).

According to Myers (2013), the underlying assumption of interpretivist research is based on the view that social constructs such as language, consciousness, shared meanings and instruments are the only means to gain access to reality, whether that reality be given or socially constructed. The openness of the interpretive paradigm to accept "multiple subjective realities" (Oates, 2006) makes it an ideal paradigm to use for studying the benefits of using social media as a learning tool. When compared to positivism and post-positivism, interpretivism has been criticised as lacking causality and generalisability. In countering this argument, however, Phoenix et al. (2013) argue that it is not that interpretivism ignores causality but rather that it treats it differently by "adopting a process-orientated conception of causal explanation". Regarding the issue of generalisability, Phoenix et al. (2013) add that interpretivism seeks to present "naturalistic generalizability" rather than presenting "statistical generalization". In Table 4-1, adapted from Myers (2013), the researcher contrasts epistemological assumptions between positivistic and interpretivist philosophical paradigms.

Table 4-1: Epistemological assumptions - Positivism vs Interpretivism (Adapted from Myers (2013))

Epistemological assumption	Positivism	Interpretivism
1. Nature of objectivity	Experience is taken to be objective, testable and independent of theoretical explanation.	Data not detachable from theory.
2. Nature of theory	Theories are held to be artificial constructions or models, yielding explanation in the sense of a logic of hypothetic-deduction.	Theories are mimetic reconstructions of the facts themselves and the criterion of a good theory is an understanding of meanings and intentions rather than deductive explanation.
3. The nature of scientific generalisation	Generalisations are derived from experiences and are independent of the researcher, his or her methods and the object of study.	The generalisations derived from experience are dependent on the researcher, his or her methods and the interactions with the subject of study.
4. Language of science	Can be exact, formalisable and literal.	Irreducibly and continually adapt themselves to changing circumstances.
5. The nature of data	Meanings separate from facts.	Meanings constitute facts.

When a researcher elects to follow the interpretivist paradigm, he or she needs to understand that there is common set of principles that must be adhered to as part of the research process. Adapted from Bhattacherjee (2012), the researcher considered and followed the six principles listed in Figure 4-4.

Interpretive Research: Common principles

- ***Naturalistic enquiry:*** The belief that social phenomena cannot be separated from their social context as they are situated within that context quantifies that the study of the social phenomena must and can only be done in its natural setting.
- ***Researcher as instrument***: The researcher is often inseparable from the social context being investigated and forms part of the data collection instrument. The researcher's ability to extract correct information, observe the behaviour of the participants and build trust with the participants are tools that form part of data collection. However, researchers need to be cognisant of their biases and preconceptions pertaining to the subject of study and they should not let these lead them to produce obscure results.
- ***Interpretive analysis:*** The interpretation of the observations must be done "through the eyes of the participants embedded in the social context" (Bhattacherjee, 2012).
- ***Use of expressive language:*** One of the fundamental principles or components that must be applied in the data analysis of an interpretive study is the ability to deduce and document both the verbal and non-verbal language of the participants.
- ***Temporal nature:*** Unlike other paradigms that focus on searching for specific answers, interpretive research is more concerned with understanding and unpacking a "dynamic social process as it unfolds over time" (Bhattacherjee, 2012). Therefor the researcher is usually required to be immensely involved at the research site.
- ***Hermeneutic circle:*** "Interpretive interpretation is an iterative process of moving back and forth from pieces of observations (text) to the entirety of the social phenomenon (context) to reconcile their apparent discord and to construct a theory that is consistent with the diverse subjective viewpoints and experiences of the embedded participants" (Bhattacherjee, 2012). The researcher will only stop doing these iterations when any additional iterations do not yield further or different insight concerning the subject of study.

Figure 4-4: Interpretive research common set of principles (Bhattacherjee, 2012)

In the next section, the researcher discusses the research approach adopted for the current study.

4.3.2 Research Approach

In an attempt to acquire new knowledge, researchers usually follow a certain plan, referred to as the "research approach" (Matsimbi, 2016). The research approach is the

component of the research design that details whether a researcher is doing “theory building” or “theory testing” (Myers, 2013). How does a researcher know whether he or she doing “building” or “testing” of theory”? Myers (2013) suggests that the distinction can be made by understanding the reasoning of the researcher, be it deductive or inductive. According to Saunders et al. (2009), deductive reasoning and inductive reasoning are the two main research approaches. A deductive approach, also known as the “top-down” approach (Myers, 2013) begins with a theory or hypothesis that needs to be tested. The basis of the theory could be from either existing literature or from informal observations by the researcher (Hayes, 2000). The result of the theory testing can either confirm or challenge the theory (See Figure 4-5 below adapted from Kova´cs and Spens (2006). However, inductive reasoning perpetuates a bottom-up approach. The researcher starts with observed evidence or collected data and then, based on the conclusions or facts gathered from the data, a theory is built (Bhattacherjee, 2012; Hayes, 2000; Myers, 2013). Although there is a common assumption that qualitative research is more suited to inductive reasoning, Myers (2013) suggests that both “inductive and deductive reasoning can be used in qualitative research”. In choosing the approach, the researcher needs to understand that an inductive approach “is more open-ended and exploratory” with the main aim being “to build a theory” (Myers, 2013). On the contrary, a deductive approach “is narrower, constrained and its purpose is to test or confirm a theory” (Myers, 2013). These two research approaches are summarised in Figure 4-5.

For the current study, the researcher chose a deductive approach. Both Hayes (2000) and Saunders et al. (2009) inspired this decision as they agree that an inductive approach is mostly suited to studies where the subject of study is a new concept and there is no prior literature or existing theories. From the current literature, backed by the theoretical framework (Social Cognitive Theory) chosen for the study, it was clear that there is a relationship between environmental factors, cognitive factors and behaviour. These are all at the core of learning and understanding how we learn. Furthermore, the literature confirms that social media is beneficial and supports informal learning.

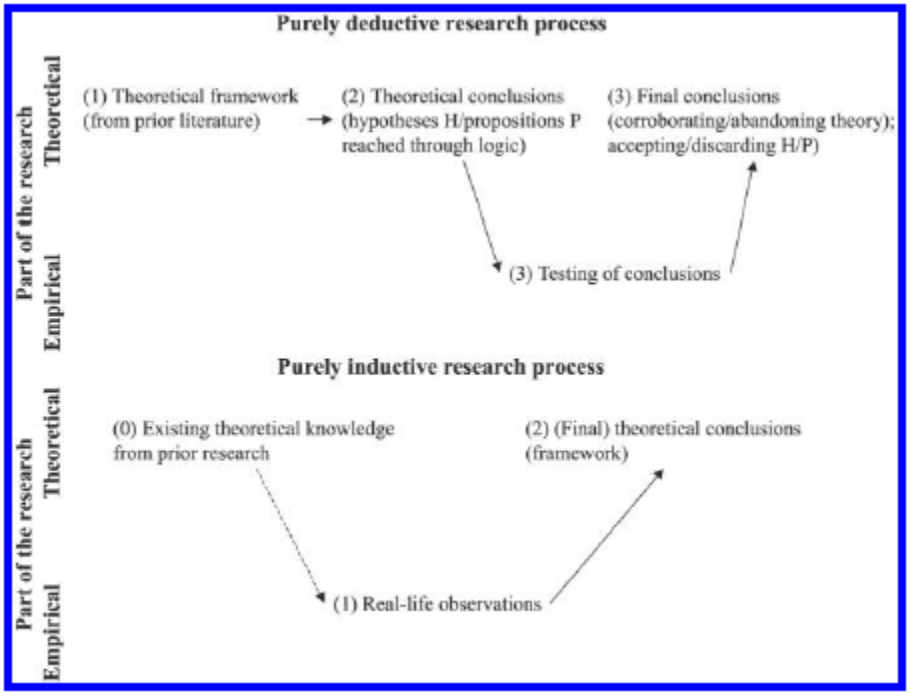

Figure 4-5: Deductive and inductive reasoning (Adapted from Kova´cs and Spens (2006))

4.3.3 Research Strategy

"Research design requires a choice of research strategy" (Schell, 1992). Although there are relatively a few research strategies, Oates (2006) lists case studies, action research, ethnographic research, experiments and surveys as the core research strategies in the Information Systems (IS) field. Table 4-2 provides a brief description of how these can be adopted in the IS field. However, in this section, the researcher dwells more on survey research as it is the chosen research strategy for the study.

Table 4-2: Core research strategies in Information Systems (Adapted from Oates (2006))

Research Strategy	Suitability in the IS field
Case Study	Most appropriate when the aim of the researcher is to conduct an in-depth study of a phenomenon using multiple methods and sources of data with the objective of understanding the relationship between context and phenomenon (Bhattacherjee, 2012; Percy, Kostere, and Kostere, 2015).
Action Research	As the name suggests, action research is research in action − the researcher, through an "iterative cycle of plan-act-

Research Strategy	Suitability in the IS field
	reflect", achieves two objectives, generating scientific knowledge and at the same time "improving the participating organization(s)" (Oates, 2006).
Ethnographic Research	When the researcher aims to gain a deep understanding of the subject under study, i.e. understanding organisational culture, which can only be achieved by spending enough time in the environment to understand the unwritten rules, then ethnographic research should be considered as a research strategy (Myers, 2013).
Experiments	Experimental research should be considered as a research strategy of choice when the aim of the researcher is to determine a cause-effect relationship (Bhattacherjee, 2012).
Survey Research	Survey research is the most appropriate strategy when the aim of the researcher is to obtain information about the views, behaviours and preferences of the people from a limited number of the population deemed to be the representative of a larger population (Hofstee, 2015).

Pinsonneault and Kraemer (1993) suggest that survey research is most appropriate if the researcher's main research question is focused on understanding "what is happening?" and "how and why is it happening?" They argue that researchers can also adopt a survey research if they have no desire or are unable to control the dependent or independent variables. In addition, a survey research is also appropriate if the researcher's focus is "to study the phenomenon in its natural settings". Finally, researchers may also use survey research if they have a need to study a subject that is either occurring in the present or has occurred in the recent past. Scholars concur that survey research can be used exploratorily, descriptively or explanatorily (Pinsonneault and Kraemer, 1993; Oates, 2006; Forza, 2002; Bhattacherjee, 2012). Researchers often follow exploratory survey research when the focus is to elicit information from a selected sample as a basis to conduct either a more descriptive or explanatory survey research (Pinsonneault & Kraemer, 1993). However, a descriptive survey research is often adopted in studies where the aim is to describe distribution and understand relevance of a certain phenomenon in a population (Forza, 2002).

Furthermore, Forza (2002) suggests that a descriptive survey research through facts obtained from the data, can offer useful hints for both theory building and theory refinement; however, theory development is not the primary aim of this strategy. Lastly, explanatory survey research, also known as theory testing or confirmatory survey research, (Forza, 2002) is most suitable when the researcher aims to explain the relationship between variables and test causal relations (Pinsonneault and Kraemer, 1993).

Based on the above, a descriptive survey research strategy was the most appropriate in meeting the objectives of the current study as the data collected through the interviews was useful for the development of an understanding of how YouTube can be used as an informal learning tool.

4.3.4 Research Choice

Whether to use a mono-method, multi-method or mixed-methods for data collection and analysis is referred to as the "research choice" (Saunders et al., 2009). When a researcher is following a mono-method in a research study, he or she makes use of one method for collecting and analysing data; this method can be either qualitative or quantitative but not both (Matsimbi, 2016). When the research choice is a multi-method, the researcher makes use of more than one qualitative or more than one quantitative method – the key being that qualitative or quantitative methods are not mixed in the study (Venkatesh, Brown, and Bala, 2013). "In a mixed methods approach the researcher combines both qualitative and quantitative research techniques, methods, approaches and concepts or languages into a single study" (Johnson & Onwuegbuzie, 2004)

Due to the similarities present between the methods, no matter which method the researcher chooses to employ, he or she will still be able to:

(1) observe the phenomenon;

(2) describe the data:

(3) construct arguments about the data:

(4) conclude why the phenomenon occurred in the way in which it did (Velez, 2008).

However, it is important that the researcher carefully select a method that will be most suitable to achieve the objectives of the study. For the current study, the researcher adopted a qualitative mono-method research choice. This means that both data collection and data analysis methods were of qualitative nature. The qualitative data collection method used was focus group interviews (Discussed in Sections 4.4.1 and 4.4.1.2). The qualitative data analysis method used was thematic analysis (Discussed in Section 4.5). The qualitative mono-method was chosen based on its ability to offer narrative explanations of the data, which is very beneficial in "understanding the contexts in which the data was gathered" (Velez, 2008).

4.3.5 Time Horizon

In conducting the research, the researcher has to decide whether the research is going to be a "snapshot taken at a particular point in time or an observation of events over a specific time period" (Oriesek, 2004). When research is conducted during a snapshot period, Saunders et al. (2009) suggest that it can be classified as having taken place at a cross-sectional time horizon. However, when a researcher investigates a problem over a period of time (anything from one month to several years), the research project can be classified as a longitudinal study (Oates, 2006). The decision whether to classify the study as cross-sectional or longitudinal is driven by the research problem under investigation and the time required to collect adequate data to answer the research question. The time constraints associated with academic courses have led to many academic researchers opting for cross-sectional studies (Saunders et al., 2009). Based on the above considerations and the nature of the study, the researcher opted for a cross-sectional study.

4.3.6 Techniques and Procedures

Close-ended and open-ended semi-structured interview questions in a focus group setup were employed as a data collection method for the study. As suggested by Myers (2013), interviews are by far the most important data gathering technique for

qualitative researchers. Interviews allow the researcher “to gather rich data from people in various roles and situations” (Myers, 2013). Purposive sampling was used as a sampling technique for the current study.

4.4 DATA COLLECTION

Data collected can be classified into two types, namely primary data and secondary data (Myers, 2013). It is important to make a clear distinction between these two sources of data. Primary data is the “original data collected for a specific research problem at hand using procedures that fit the research problem best” (Hox and Boeije, 2005). Secondary data refers to “any data that the researchers gather that has been previously published” (Myers, 2013). Logically speaking, data collection is a separate activity from the data analysis; however, Myers (2013) suggests that it is important that the researcher understands that the amount and type of data collected will determine the amount and type of analysis that needs to be done on the data – in other words, there is a ripple effect. There are many data collection techniques that are available for qualitative research studies (Gill et al., 2008): interviews, observations, questionnaires and documents, to name but a few (Oates, 2006). According to Oates (2006), it is often assumed that when a researcher adopts a survey research then by default they will choose to use questionnaires as the data collection method, however, Oates (2006) argues that other data collection methods such as documents, interviews and observations can be adopted for survey research. For the current study, the researcher opted for interviews as the most appropriate data collection technique. Interviews as data collection technique are discussed in detail in the next section.

4.4.1 Interviews

“Interviews are one of the most important data gathering techniques for qualitative research” (Myers, 2013; Gill et al., 2008). Antwi and Hamza (2015) agree with Myers, arguing that qualitative research studies use mostly “interviews, focus group discussions and naturalistic observations” as data collection methods, as the nature of interpretivist research is to gain a deeper understanding of the subject under study.

According to Gill et al. (2008), interviews are an appropriate technique when the main aim of the researcher is to *"*explore the views, experiences, beliefs and/or motivations of individuals on specific matters" as they provide a detailed understanding of the study phenomenon. There are many kinds of interview; however, scholars agree that these can be classified into three types, namely structured, unstructured and semi-structured interviews (Gill et al., 2008; Oates, 2006; Myers, 2013). By definition structured interviews enable the interviewer or the researcher to make use of pre-defined, standardised, identical interview questions for every interviewee, "usually asked in a specific order, often using pre-coded answers and sometime asked within a specified time frame" (Myers, 2013; Oates, 2006). Another key distinguishing feature of structured interviews lies in the fact that the interviewer is in control (Oates, 2006). Unstructured interviews are merely the inverse of structured interviews. What is important to note in unstructured interviews is that the interviewee is more in control than the interviewer is; the interviewer introduces a topic and lets the interviewee talk freely about his or her views and beliefs relating to the topic at hand (Oates, 2006). "Semi-structured interviews sit somewhere between structured and unstructured interviews" (Myers, 2013). In semi-structured interviews the interviewer has a list of themes and high-level questions to be covered and explored as part of the interview; however, the interviewee is allowed room to diverge or pursue an idea in more detail as he or she sees fit (Gill et al., 2008; Oates, 2006).

When a researcher opts to use structured interviews as data collection method, the main advantage is that the responses will be consistent across all interviews (Gill et al., 2008); however, Myers (2013) warns that this same advantage is one of the major disadvantages of this technique. Pre-formulated questions limit the researcher in pursuing new lines of enquiry, even if they emerge during the interview (Myers, 2013). The biggest advantage presented by unstructured interviews is the ability of the interviewee to talk freely, telling the interviewer everything that might be deemed important (Oates, 2006); however, Myers (2013) again warns that this could also be one of the major disadvantages of this technique. The interviewer may obtain too little or too much information, depending on what mood the interviewee is in (Myers, 2013). Having compared these three types of interview, both Myers (2013) and Gill et al. (2008) agree that semi-structured interviews are the best choice as they allow the

"flexibility for the discovery or elaboration of information that is important to participants but may not have been thought of as pertinent by the research team" (Gill et al., 2008).

Interviews can further be classified as either individual interviews (one-on-one interviews whether in person or on the phone) or group interviews (Myers, 2013). Group interviews are also known as focus groups. For the current study, the researcher elected to use group interviews or focus groups as a data collection method. As the data collection method was focus group interviews, it is important to understand how the researcher selected the participant sample for the study. In the next section the researcher discusses sampling as a precursory step to the selection of the sample of the focus groups.

4.4.1.1 Participant selection

Sampling is a crucial and an important step in the qualitative research process (Robinson, 2014). Bhattacherjee (2012) defines sampling as "the statistical process of selecting a subset (called a *sample*) of a population of interest for the purposes of making observations and statistical inferences about that population". According to Bhattacherjee (2012), the sampling process comprises three stages, namely (1) Identifying the "population"; (2) Choosing a "sampling frame" and (3) selecting a "sample" as depicted in Figure 4-6 below. *Population* refers to the group the researcher aims to generalise to; for the purposes of this study, the population was identified as children aged 11 to 13 years. Oates (2006) refers to a sampling frame as some kind of list or collection of the whole population of people the researcher can use to draw the sample from. For the current study, the sampling frame was identified as the Grade 5 to Grade 7 learners based at a primary school in Centurion, South Africa.

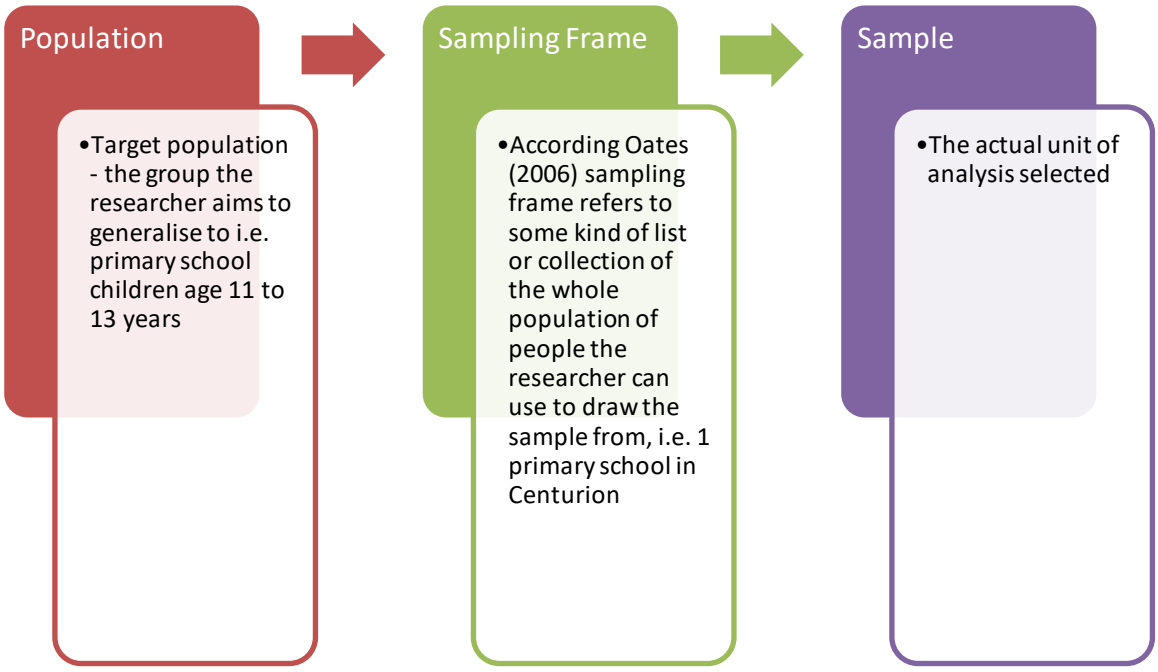

Figure 4-6: Sampling process (Adapted from Bhattacherjee, (2012))

The final step in the sampling process is selecting a sample. Although it would be ideal in all research to use the whole population, constraints such as feasibility, costs and time make it impossible in many instances to study the whole population, and as such, for observation and analysis purposes, a sample is often used as a representation of the population of interest (Bhattacherjee, 2012; Etikan et al., 2016). A sample can be selected using a sampling technique. Two broad categories are used as group sampling techniques, namely probability (random) sampling and non-probability sampling (Oates, 2006; Bhattacherjee, 2012; Taylor-Powell, 1988). Table 4-3 below adopted from Oates (2006) lists the types of probabilistic and non-probabilistic sampling techniques.

Table 4-3: Sampling techniques (Oates, 2006)

Probabilistic	Non-probabilistic
Random	Purposive
Systematic	Snowball
Stratified	Self-selection

Probabilistic	Non-probabilistic
Cluster	Convenience

In probability sampling there is a provision for random sampling, implying that each unit of analysis has an equal known chance of being selected. This makes probability sampling a sampling technique of choice when the purpose of the study is to generalise to the entire population as it provides a "statistical basis for reporting that the sample drawn is representative of the entire population" (Swanson and Holton III, 2009). Probability sampling is used mainly in studies with quantitative orientation (Teddlie and Yu, 2007). In non-probability sampling (also known as purposive sampling (Teddlie and Yu, 2007)) some units of the population have a zero chance of being selected (Bhattacherjee, 2012) as subjective methods such as quota or convenience are used to select the sample. When using this technique, estimation of sampling errors is not allowed and the technique is subject to sampling bias, making it impossible to generalise to the entire population (Bhattacherjee, 2012). Table 4-4 below adapted from Teddlie and Yu (2007) shows the comparison between purposive (non-probability sampling) and probability sampling techniques:

Table 4-4: Comparisons between purposive and probability sampling (Teddlie & Yu, 2007)

Dimension of contrast	Purposive (Non-probability) Sampling Technique	Probability (Random) Sampling Technique
Other names	Purposeful sampling Non-probability sampling Qualitative sampling	Scientific sampling Random sampling Quantitative sampling
Overall purpose of sampling	Designed to generate a sample that will address research questions.	Designed to generate a sample that will address research questions.
Issue of generalisability	Sometimes seeks a form of generalisability (transferability).	Seeks a form of generalisability (external validity).
Rationale for selecting cases/units	To address specific purposes related to research questions. The researcher selects cases she or he can learn the most from.	Representativeness. The researcher selects cases that are collectively representative of the population

Dimension of contrast	Purposive (Non-probability) Sampling Technique	Probability (Random) Sampling Technique
Sample size	Typically small (usually 30 cases or fewer).	Large enough to establish representativeness (usually at least 50 units).
Depth/breadth of information per case/unit	Focus on depth of information generated by the cases.	Focus on breadth of information generated by the sampling units.
When the sample is selected	Before the study begins, during the study, or both.	Before the study begins.
How selection is made	Utilises expert judgment.	Often based on application of mathematical formulas.
Sampling frame	Informal sampling frame somewhat larger than sample.	Formal sampling frame typically much larger than sample.
Form of data generated	Focus on narrative data. Numeric data can also be generated.	Focus on numeric data. Narrative data can also be generated.

Marshall (1996) suggests that random sampling is not the most appropriate sampling technique for qualitative studies due to its focus on generalisation rather than understanding complex issues relating to human behaviour. According to Barbour (2001), qualitative researchers in the past relied on convenience sampling as a sampling technique especially "when the group of interest was difficult to access". Robinson (2014), however, argues that the problem with using convenience sampling as a sampling technique is that researchers may end up with unwarranted generalisations, particularly if the sample population is broad. These limitations of convenience sampling have resulted in researchers exploring and opting to use purposive sampling for qualitative studies. One of the major advantages of purposive sampling is that it allows the researcher a certain level of control over the sample being selected (Barbour, 2001). The researcher is also able to decide to include "outliers" in the sample set (Barbour, 2001). For the current study, purposive sampling was selected as a sampling technique. The rationale for adopting the purposive sampling technique was informed by the researcher's a-priori theoretical understanding of the topic being studied, with the assumption that "certain categories of individuals may have a unique, different or important perspective on the phenomenon in question and their presence in the sample was to be ensured" (Robinson, 2014). The sample

comprised 22 learners (boys and girls) from a primary school in Centurion, South Africa.

In the next section, the researcher discusses focus groups as the selected data collection techniques.

4.4.1.2 Focus groups

“The purpose of a focus group interview is to get collective views on a certain defined topic of interest from a group of people who are known to have had certain experiences” (Myers, 2013). A focus group is defined as “a technique involving the use of in-depth group interviews in which participants are selected because they are purposive” (Rabiee, 2004). The decision to use focus groups as a data collection technique for this study was justified by a number of factors, including the age of the participants and the type of data the researcher aimed to obtain from the participants. In addition, because social media use by children carries a bad stigma with adults, by using focus groups the researcher sought to avoid a situation where the participants would be uncomfortable with one-on-one interviews and would have ended up telling the researcher what they believe she wanted to hear as opposed to what was actually happening. This reasoning is supported by Heary and Hennessy (2002), suggesting that “The fact that children may respond in ways that they believe the researcher desires has long been seen as a threat to validity in one-to-one interviews between adults and children”. Kitzinger (1995) argues that focus groups are beneficial for data collection as they encourage participation from interviewees who would rather have been uncomfortable and reluctant to be interviewed on their own (such as those intimidated by the formality and isolation of a one to one interview)”. Another aspect of a focus group is that individuals talk and comment on the topic under research from their personal experiences (Powell and Single, 1996). In focus groups the researcher is able to gain an in-depth understanding and “the rich details of complex experiences and the reasoning behind an individual's actions, beliefs, perceptions, and attitudes" (Powell and Single, 1996).

This study focused on a group of 22 learners between the ages of 11 and 13 years in a Centurion Primary School. Gill, Stewart, Treasure, and Chadwick (2008) counsel that great care should be taken in composing the focus group in order to obtain the best quality from the discussions. The researcher needs to be aware that factors like age, sex and the social status of the participants will always have an impact on the data obtained from the group and this fact needs to be taken into consideration when composing the groups (Gill et al., 2008). The researcher decided to settle for a mix of both pre-existing groups and stranger groups. In composing the groups, the researcher divided the learners into groups of four, comprising between five and six members per group.

Ryan, Gandha, Culbertson, and Carlson (2014) suggest that a focus group typically comprises “a group of six to eight participants, purposefully selected based on a significant homogeneous characteristic; engaging in a face-to-face one to two hour discussion of a limited set of topics”. According to Rabiee (2004), a group is more manageable when the group size is between six and eight participants and “smaller groups show greater potential”. Gill et al. (2008) agree with Rabiee, stating, “The optimum size for a focus group is six to eight participants, excluding the researchers”. When group numbers are limited to between six and ten participants, the group is large enough for the researcher to gain a variety of perspectives and at the same the group is small enough to avoid chaos (Rabiee, 2004). According to Heary and Hennessy (2002), when an adult focus group comprises eight members, the researcher is able to get information that is more detailed from the group than when a group comprises only four members. However, the same study could not be confirmed for focus groups where the participants are children. To ensure that the groups were diverse, gender and grade in the current year were factors used to stratify the groups. The researcher both audio-recorded and transcribed the interviews.

According to Myers (2013) and Oates (2006), focus groups come with some challenges; firstly, some participants may feel the need to dominate the group and the interviewer must be able to manage the group and not allow matters to get out of hand. Secondly, the interviewer must be able to “encourage reluctant respondents to participate” (Myers, 2013). Lastly, to ensure full coverage of the topic, the interviewer must succeed in obtaining responses from the entire group.

Table 4-5 details the data collection framework (Adapted from Zachman (2003)) that the researcher employed in the study.

Table 4-5: Data collection Framework (Adapted from Zachman (2003))

Probe	Description
What (data)	Data collected by means of group interviews (focus groups) using semi-structured interviews.
How (function)	Open-ended and close-ended questions used to solicit responses from the participants.
Where (venue)	Interviews were held at school. The school provided a room for the interviews.
Who (people)	22 primary school children aged 11 to 13 years.
When (time)	Interviews ran from 08:30 a.m. to 12:00 p.m.
Why (motivation)	The objective of the interviews was to determine *how* and *why* children use YouTube as a learning tool.

4.5 DATA ANALYSIS

The main goal of the data analysis stage is to conduct a "thorough and unbiased interpretation of primary sources of data, along with an innovative synthesis of the evidence," leading to a unified and integrated conclusion about the research problem (Whittemore and Knafl, 2005). Contrary to the understanding that the data analysis stage should always follow sequentially on the data collection stage of the research project (Myers, 2013), Pope, Ziebland, and Mays (2000) suggest that in qualitative research it is almost inevitable to separate the data collection and data analysis process completely. The main reason for this is the fact that in most qualitative studies, while the researcher is in the field collecting data, he or she begins to think about emerging themes as they relate to the study phenomenon. Pope et al. (2000) further argue that this "continuous analysis" of data is advantageous to the research process as it may aid the researcher in refining the research questions based on what emerges from analysed data. There are many ways of qualitative data analysis researchers can choose from; however, for the current study the researcher employed the five-stage data analysis framework approach, depicted in Figure 4-7 below. The five stages of this framework are Familiarisation, Identifying a thematic framework, Indexing,

Charting, and Mapping and Interpretation. The selection of this data analysis framework was justified by the data analysis framework approach as suggested by Pope et al., (2000). Table 4-6 describes each stage of the framework in detail.

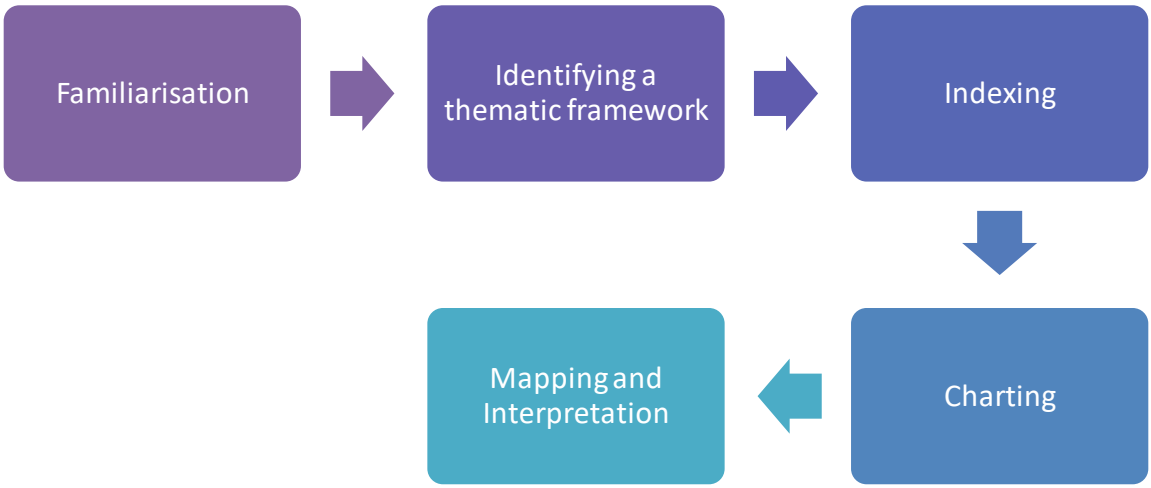

Figure 4-7: Data analysis framework approach (Adapted from Pope et al. (2000))

Table 4-6: Data analysis framework approach (Adapted from Pope et al. (2000))

Data analysis framework approach	
Stage	**Description**
1. Familiarisation	In this stage, the researcher becomes immersed in the raw data by listening to the audio recordings of the focus group interviews. The main purpose is to list key ideas and recurrent themes.
2. Identifying a thematic framework	The main purpose of this stage is to identify "all the key issues, concepts, and themes by which the data can be examined and referenced" (Pope et al., 2000). To achieve the objective of this stage, the researcher has to draw on a priori issues and questions based on the aims and objectives of the study. Furthermore, recurrent issues in the data and issues raised by the participants are taken into consideration as part of this stage. This stage is completed by producing a detailed data index, which presents the data in manageable chunks for retrieval at a later stage.
3. Indexing	The main purpose of this stage is to apply "the thematic framework or index systematically to all the data in textual form" (Pope et al., 2000).

Data analysis framework approach	
4. Charting	In the charting stage, there is a considerable amount of abstraction and synthesising of the data. The main aim is to ensure that the researcher is able to chart and present the data or themes in distilled summaries of views and experiences.
5. Mapping and interpretation	Following from the charting stage, the researcher is able to "define concepts, map the range and nature of the phenomena, create typologies and find associations between themes with a view to providing explanations for the findings" (Pope et al., 2000). The aim and research objectives of the study and the themes identified/emerging during data analysis influence the completion of this stage.

Much data comes from the qualitative data collection (Myers, 2013). This data can sometimes be overwhelming and requires the researcher to ensure choosing the most appropriate data analysis method. The data collected for this study was analysed using thematic analysis. Over the years, thematic analysis has been used as one of the appropriate methods to analyse qualitative data. Thematic analysis (TA) is defined as "a method for identifying, analysing and reporting patterns (themes) within data" (Braun and Clarke, 2006). The benefit of using thematic analysis is that it "enables patterns and themes to be identified, organized and analysed in detail based on a careful reading and rereading of the information collected" (Gallardo, Marqués, and Bullen, 2015). By making use of thematic analysis, the researcher was able to deduce the results, which led to a "correct understanding and interpretation of the phenomenon being studied" (Gallardo et al., 2015). TA is also regarded a flexible method that is useful for providing a complex, rich and detailed account of data (Vaismoradi, Turunen, and Bondas, 2013). Alhojailan (2012) argues, "Thematic Analysis provides the opportunity for researchers to move beyond calculating unambiguous words or statements or expressing the ideas". In thematic analysis, data is analysed by searching and identifying common themes coming from the interviews or observations (Vaismoradi et al., 2013).

Percy, Kostere, and Kostere (2015) list three types of thematic analysis, namely (1) inductive analysis, (2) theoretical analysis and (3) thematic analysis with constant comparison. These types of thematic analysis are described in Table 4-7

Table 4-7: Types of Thematic Analysis (Percy et al., 2015)

Type of Thematic Analysis	Description
Inductive thematic analysis	This type of thematic analysis is driven by data. The idea is not to ensure that the data can be categorised based on pre-existing understandings and theories, but rather data is individually analysed as received from the participants and common themes and patterns are extracted with the aim to understand implications based on the subject of study.
Theoretical thematic analysis	This type of thematic analysis is theory-driven and often adopted in cases where the researcher has pre-existing themes to examine during the data analysis phase. The pre-existing themes are often found within the main research question and objectives of the study. Although the researcher may use the pre-existing themes or categories to analyse the data, it is advisable to remain open to the possibility that new themes may emerge during the analysis.
Thematic analysis with content comparison	This is an iterative approach of either the inductive thematic analysis or theoretical thematic analysis. Data is analysed as it is collected and the researcher moves back and forth between the iterations until a composite synthesis of the question under study is formed from the synthesised data.

Theoretical thematic analysis was adopted for the current study. The researcher employed the underlying theoretical framework of social cognitive theory to inform and categorise the themes. The analysis of the data was based on the understanding and interpretation of the researcher as the data was collected using interviews. In-depth details of how the data was analysed are discussed in Chapter 5.

In the next section, the researcher discusses ethical consideration adopted for the current study.

4.6 ETHICAL CONSIDERATIONS

The Oxford English dictionary defines ethics as the “moral principles that govern a person's behaviour or the conducting of an activity” or “the branch of knowledge that deals with moral principles (Oxford Dictionaries, 2018). In recent years most, if not all universities, have required that students get clearance from the university’s ethical clearance committee as part of the research process (Myers, 2013). While some may view this as an additional unnecessary step in the research process, it is vital to understand that this is crucial as it not only protects the university, but also the participants and the researcher as the research process is a triangular relationship between the university, the researcher and participants as illustrated in Figure 4-8.

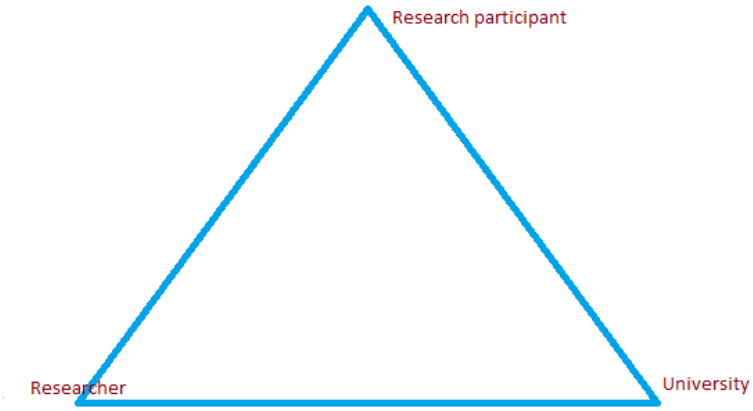

Figure 4-8: Research ethics triangular relationship

According to Oates (2006), “the right to participate, right to withdraw, right to give informed consent, right to anonymity, right to confidentiality and a responsible ethical researcher” are all aspects of ethical considerations that researchers should take into account as they embark on their research studies. Guided by Bhattacherjee (2012) and Myers (2013), the researcher considered the following principle as part of the ethical considerations for the current study:

- **Voluntary participation and Informed consent**: According to Bhattacherjee (2012) and Myers (2013), participants should be made aware that their participation is voluntary and that they have the right to withdraw at any given point should they feel uncomfortable to continue with the research study. Participants in the current study were given an informed consent form to complete prior to the data collection process and were made aware of their voluntary participation right.

- **Honesty**: The researcher confirms that the research was conducted in an honest manner, including data collection, findings and research methods.
- **Anonymity and confidentiality**: “Anonymity implies that the researchers or readers of the final research report should not be able to identify a given response with a specific participant” (Bhattacherjee, 2012). If the researcher is conducting qualitative research using interviews, it is impossible to maintain anonymity; however, in this case, the researcher agreed to maintain confidentiality (Bhattacherjee, 2012).
- **Permission to publish:** The researcher also agrees that if it so happens that the paper is published, written consent from the participants or their parents or legal guardians will be obtained prior to such publication.

For this study the researcher considered the above considerations and as such, prior to data collection process, contacted the school and asked for permission to use its learners as participants in the study as well as conduct interviews with the learners. As the participants were minors, the researcher worked together with the school to obtain consent from the parents and/or legal guardians of the minors allowing the learners to participate in the study. The consent forms detailing the purpose of the study and how the interviews were to be conducted were sent home with the children two weeks prior to the data collection. All children returned their consent forms to school before the interview date. Details of the consent form are included in Appendix B. Furthermore, the Gauteng Department of Education (GDE) requires that all researchers conducting research in its schools obtain a prior approval from them prior to conducting the research. The research proposal was submitted to the GDE and approval was granted prior to the data collection taking place.

4.7 CONCLUSION

The aim of this chapter was to define the research methodology that the researcher followed in answering the main research question and objectives of this study. In order to investigate the benefits of using social media as informal learning tool for children, the researcher selected a YouTube descriptive survey research, placed in the interpretivist paradigm; a purposive sample of twenty-two 11 to 13 year olds from a

primary school in Centurion, South Africa, was recruited to take part in the study as the research participants. Group interviews were selected as the data collection method. Data collected was analysed using thematic analysis. Table 4-8 depicts a summary of the chapter and the selected research design for the current study.

Table 4-8: Summary of Chapter 4

Research Design Summary	
Research Philosophy	Interpretivism
Research Approach	Deductive
Research Strategy	Descriptive Survey Research
Research Choice	Mono-method (Qualitative)
Time Horizon	Cross-sectional
Data Collection	Interviews (using focus groups)
Sampling Technique	Purposive sampling
Data Analysis	Theoretical Thematic Analysis
Ethical Considerations	See Appendix B for the consent form

5 CHAPTER 5: DATA COLLECTION, ANALYSIS AND DISCUSSION

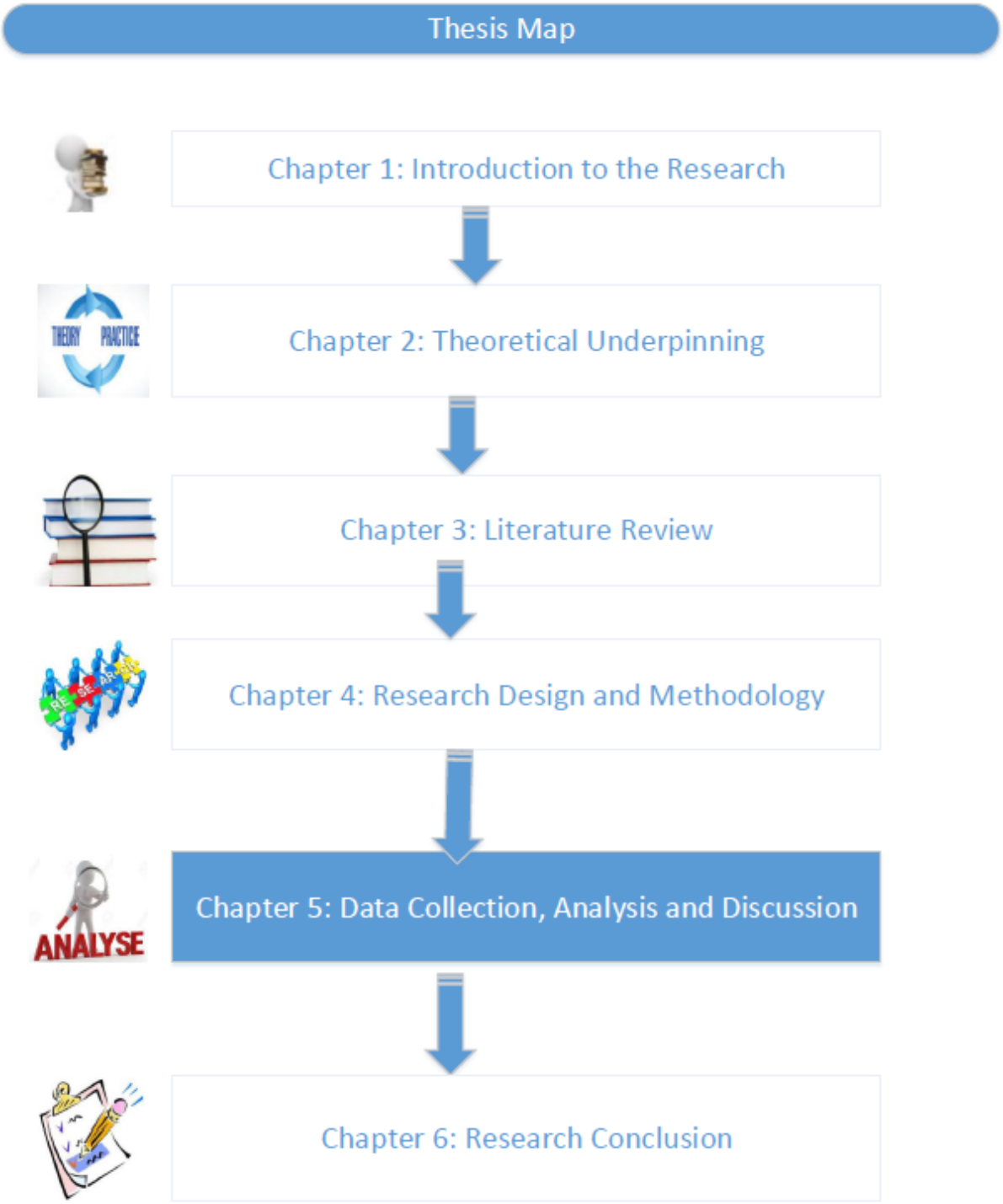

Figure 5-1: Thesis map

5.1 INTRODUCTION

In the previous chapter, the researcher articulated the research methodology that was followed in conducting the current study. Focus groups (also known as group interviews) as the data collection method used for the study were discussed in detail. In this chapter, the researcher presents the data collected together with the themes identified from the data. In order to gain a full understanding of the children's views and opinions of the benefits of using YouTube as an informal learning tool, a purposive sample was selected from a primary school based in Centurion, Gauteng Province, South Africa. The participants were a group of twenty-two learners aged 11 to 13 years. Although many scholars agree that an ideal group size for a focus group should be between six and ten participants (Ryan et al., 2014; Gill et al., 2008; Rabiee, 2004), Heary and Hennessy (2002) have a different view, particularly regarding focus groups consisting of children. The suggestion of Heary and Hennessy (2002) is that where participants are children, "it is preferable to have four or five participants in the group to ensure that there are at least three 'talkers' in the group". When composing focus groups for children, researchers tend to go for anything between four and six members per group (Heary and Hennessy, 2002). Based on the reasons mentioned above, the participants were further grouped into four focus groups comprising six members on average from fifth, sixth and seventh grades. Of the four groups, two groups had five members each and the other two had six members per group. Due to data saturation being evident from the second group, the researcher concluded to limit the number of groups to four.

Furthermore, regarding the size of the group, the researcher looked at the demographic profile of the groups. Age, gender and grade in the current year were the demographic factors that the researcher took into consideration in forming the different focus groups. The participants were all between the ages of eleven and thirteen years old, which is the right age for conducting focus group interviews. According to Heary and Hennessy (2002), focus groups are suitable as a data collection method where the participants are older than the age of six, as the interviewer would hardly get any meaningful information out of the sessions from younger children. Each group had members that were eleven, twelve and thirteen years old; the researcher decided to

stratify the groups by ensuring that each group comprised learners from the three grades. By mixing the grades / age groups, the researcher aimed to eliminate the peer pressure that could have been exerted on children if they were all in the same grade or knew one another well. Heary and Hennessy (2002) support this idea, arguing, “Peer pressure in group settings is diminished when children do not know one another”.

The gender of the participants was another factor that the researcher took into consideration in forming the focus groups. All four groups comprised mixed gender. According to Heary and Hennessy (2002), mixed gender groups work well for children between the ages of nine and eleven years but may need to be altered for children from thirteen years and older. Finally, the last consideration during the data collection process was the duration of the interviews. On average, the interviews ran for a total of thirty-three minutes with the first and second group’s interviews being the longest at forty-five and thirty-three minutes respectively. The third and fourth group interviews ran for a total of twenty-nine minutes and twenty-eight minutes respectively. The reduced duration of the interview for the last two groups can be ascribed to the fact that data saturation was reached in the second group as indicated in the preceding paragraph.

The interviews were highly unstructured; interview questions were, however, prepared prior to the interviews to help guide the conversation and were similar for all four groups. Interview questions were prepared based on the research questions in Section 1.5 of Chapter 1.

The demographic profile of the participants is presented in detail in the next section.

5.2 DEMOGRAPHIC PROFILE OF THE PARTICIPANTS

The first section of the interview guide included the demographic details of the groups. The details pertaining to the gender, ethnicity group, age, grade, number of participants per group and duration of the interview are presented graphically in the next few sub-sections.

5.2.1 Gender

As stated in the previous section, the researcher opted for composing the groups based on mixed gender. The number of male learners vs. female learners per group is indicated in Figure 5-2 below.

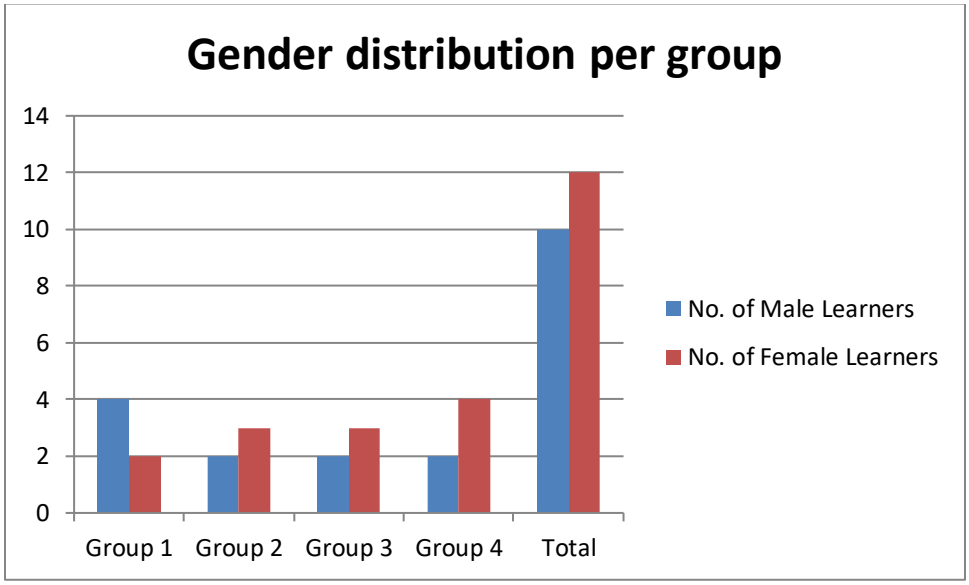

Figure 5-2: Gender distribution per group

As can be seen in Figure 5-2 the total sample contained more female than male learners; 55% of the learners were females whereas only 45% were males. This was evident in the formation of the groups; in almost all the groups the number of female learners was dominant with the exception of Group 1 where there were 66% male learners and 33% female learners.

5.2.2 Ethnicity

In this section, the ethnic demographics of the groups are presented. Although ethnicity was not used as a factor to stratify the groups, the groups had representation across the four major ethnic groups in South Africa. Figure 5-3 below shows the ethnic representation per group:

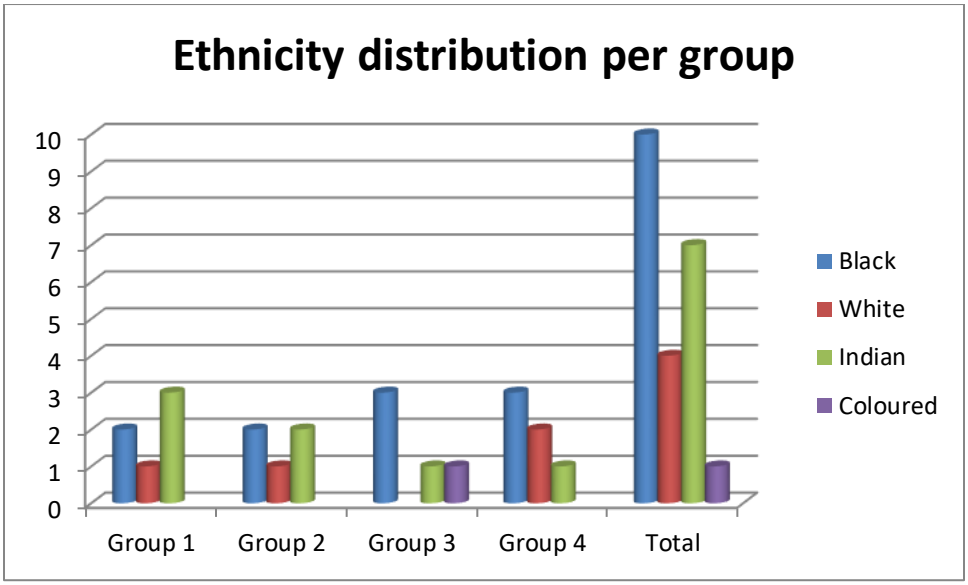

Figure 5-3: Ethnic distribution per group

From Figure 5-3 above it can be seen that ten (45%) of the participants were black. Seven (32%) participants represented Indians. Four (18%) learners represented white learners across the groups and there was only one coloured learner making up the last 5% of the total sample. These ethnic demographics are in line with the demographic representation of greater South Africa.

5.2.3 Age

The age of the participants ranged from 11 to 13 years. There were seven 11-year-olds, representing 32% of the total sample, seven 12-year-olds, also representing 32% of the total population and finally eight 13-year-olds representing 36% of the total sample. These results show that there was a fair distribution and representation of each age group in the total sample. The age distribution per group is represented in Figure 5-4 below.

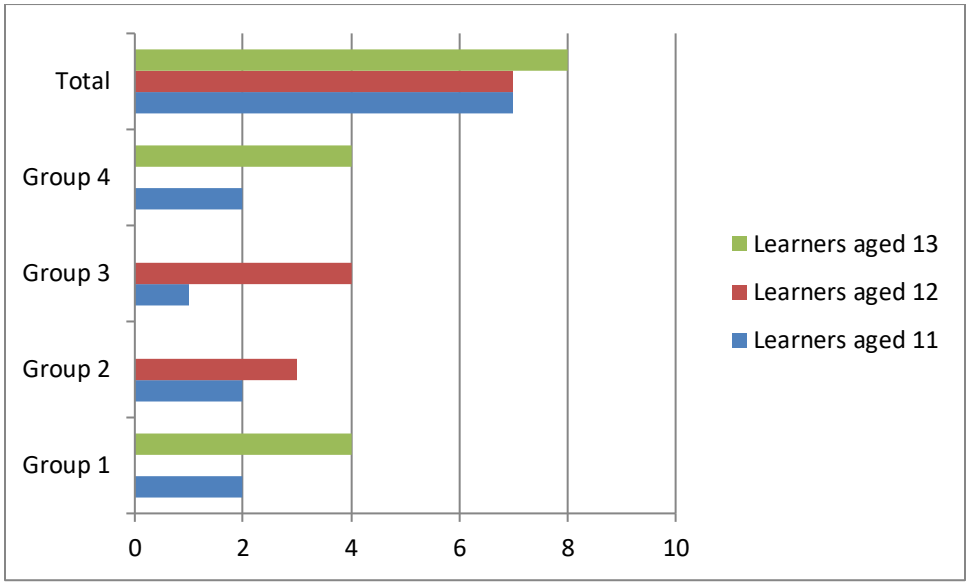

Figure 5-4: Age distribution per group

In Figure 5-4 above it can be seen that the 11-year-olds were represented across all four groups while the 12- and 13-year-olds were represented in two groups only.

Section 5.3 below describes in detail how the data was analysed.

5.3 PRESENTATION OF RESULTS

Interview data was analysed based on the interpretation of the researcher. In Chapter 2 the researcher presented the notion that cognitive theorists believe that there is an "on-going reciprocal interaction" (Compeau and Higgins, 1991) between behaviour, environment and cognitive factors (Bandura, 2001). In addressing the objectives of the study, the Social Cognitive Theory framework was used as an underlying framework from which the themes were derived (See Figure 5-5 below). By following the data analysis framework approach suggested by Pope et al. (2000) the researcher was able to identify initial codes from the data by examining the audio recordings of the interviews. The initial codes identified together with the raw data from the interview extracts are presented in Table 5-1 below:

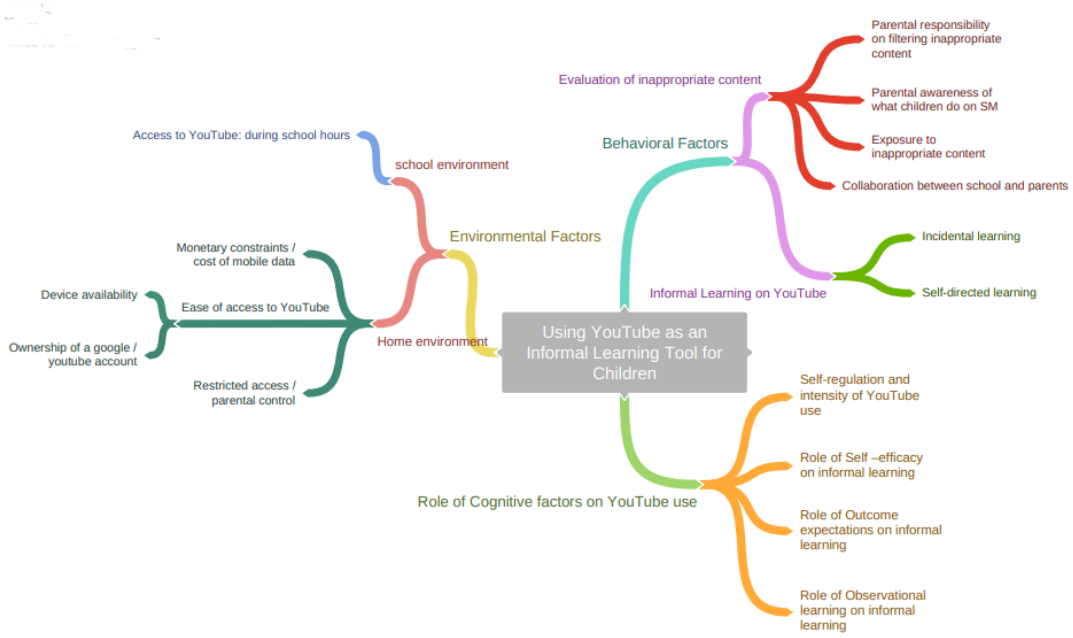

Figure 5-5: Thematic analysis map − an SCT framework

Table 5-1: Coded raw data extract

Raw data extracts	Code	Sub-code
Question/s: Do you use YouTube? If so, how do you access it? **Answers:** - "Yes, we use our play stations, phones, laptops, TV, iPads." - "I use my mom's phone." - "Sometimes I use my brother's phone."	Ease of access to YouTube – home environment	Device availability
Question: Do you use your personal YouTube account? **Answers:** - "Yes, I have my own account." - "No, I use the guest account." - "I use my mom's account." - "I use my brother's account, he is at University."		Ownership of YouTube account
Question/s: Do you think YouTube consumes much data? **Answers:** - "Yes! I only watch videos when I am connected to Wi-Fi."		Monetary constraints / costs of mobile data

Raw data extracts	Code	Sub-code
- “The one time I had 250 megabytes data and after 30 minutes my data was finished after I had watched a video on YouTube and I said never again.” **Question/s:** Do you buy your own data? **Answers:** - “I am on contract – I get 500 megabytes a month.” - “I use Wi-Fi at home, when it is on.” - “I get 1 gigabyte a month, my brother gets 10 gigabytes.”		
Question/s: Are there any restrictions at home on how long you can watch YouTube and what you can watch on YouTube? **Answers:** - “Not really, but my dad checks my history.” - “My Dad will do the same for me and if he finds something bad; then he will ban me for like 3 weeks , and that is really painful for me, painful.” - “I have to tell my mom exactly what I am looking for and watching on YouTube.” - “As long as I am done with my homework, chores and school work then I can watch YouTube.”		Restricted access / Parental control
Question/s: Do you think YouTube should be incorporated into the school curriculum? Are there any restrictions on the use of YouTube at school? **Answers:** - “Well, no. And again, what will the children use to access YouTube? The free Wi-Fi here at school doesn’t work that well.” - “No, unless the school would have a way of checking exactly what everyone is watching, YouTube can be addictive.”	School environment	Access to YouTube during school hours
Question/s: What content appeals most to you on YouTube? **Answers:** - “Most of the time I watch music videos.” - “I mostly look at DIY videos and comedians.” - “I watch skating videos to learn skating tricks.”	Behavioural factors - informal learning on YouTube	Self-directed informal learning

Raw data extracts	Code	Sub-code
- “I like watching videos where they show you stuff like skills and videos that show you how to make stuff.” - “I watch comedy, sport, funny videos, vines, games and learning new tricks for the games.”		
Question/s: Do you think children can benefit from using YouTube? Have you learnt any new skills from YouTube? **Answers:** - “Since I watched the music videos, I now know lyrics to the songs.” - “I learnt how to sing from the music videos.” - “Not really, but now I know how to make stuff from recycled material.”		Incidental learning
Question/s: Is it easy for children to see inappropriate content on YouTube? What should be done to ensure children are safe on YouTube? Should children be allowed open access to YouTube? **Answers:** - “Yes it is easy for children to see inappropriate content. Once I clicked on this video by mistake, it went up while I clicked. There was a lot of swearing … I said I was never going to use YouTube again after that, the video was bad, they pointed a gun at someone.” - “I once searched World War II because I was interested, and the resulting videos really showed disturbing things.” - “If you see an inappropriate video you can send an email to the owner of YouTube and they will ban the person who posted the video. For example, there was this lowlife pimp and he showed videos of himself pointing guns at his mouth and then they banned him.” - “No, children should not be allowed open access; then it will be easy for them to go to any kind of videos.” - “To ensure children are safe parents must download YouTube Kids for their children.” - “There must be a parental lock.”	Behavioural factors – evaluation of inappropriate content	-Exposure to inappropriate content - Parental awareness of what children do on social media - Parental responsibility in adding filters - Parental education about the dangers - Collaboration between parents and school

Raw data extracts	Code	Sub-code
Question/s: Who introduced you to YouTube? Do children know when to stop watching YouTube? Why do you watch YouTube? How do you know all this stuff about YouTube? Can you teach someone how to use YouTube? **Answers:** - "The only way some children will stop watching it is when the message that says, "You have run out of data" pops up." - "My brother is addicted, it's really not funny. He got a play station for his birthday and ever since then he has gained a lot of weight because he is using the play station 24/7, he refuses even to go for a walk with my parents "− role of self-regulation - "I figured YouTube out and I also watched my friends." "I was eavesdropping on my brother and he was watching YouTube, that's how I learnt." – role of observational learning - "If I didn't know how to use YouTube I would search on YouTube for videos on how to use YouTube." − role of self-efficacy - "To ensure children are safe parents must download YouTube for kids for their children." - "I like looking at DIY videos." "Sometimes if I want to get definitions or translate some words from Afrikaans." − role of outcome expectation	Role of cognitive factors on YouTube use and informal learning	-Role of self-regulation on the intensity of use - Role of perceived self-efficacy on informal learning -Role of outcome expectations on informal learning -Role of observational learning on informal learning

From the initial codes generated above, the researcher determined, reviewed and defined themes. The themes identified are presented in Table 5-2 below.

Table 5-2: Main themes and sub-themes identified from the data

Social Cognitive Theory Element	Themes	Sub-themes	Interpretation of theme
Environment	Home environment	Ease of access to YouTube	In this theme, the researcher looks at the influence of the "home (imposed) environment" on the behaviour (use of YouTube). The impact of the ease of access on a device that would allow children access to YouTube is explored. Furthermore, restricted access, parental control – are also explored as another factor that would influence how children use YouTube. Finally, monetary constraints that translate to cost of mobile data are also discussed under this theme as another environmental factor that influences the use of YouTube by children.
		Restricted access / Parental control	
		Monetary constraints / Cost of mobile data	
	School environment	Access to YouTube during school hours	In this theme, the analysis of the results pertaining to how children feel about the use of YouTube at school and during school hours is discussed.
Behaviour	Informal learning on YouTube	Self-directed learning	In this theme, the researcher focuses on learning behaviour – particularly self-directed learning that takes place among children on YouTube.
		Incidental learning	Incidental learning was selected as another form of informal learning that takes place among children on YouTube. Elements of this type of learning are discussed in detail under this theme using excerpts from the raw data.
		Evaluation of inappropriate content	This theme relates to the children's understanding of inappropriate content that they may be exposed to on YouTube; how they believe the content should be filtered to allow them to continue using YouTube.

Social Cognitive Theory Element	Themes	Sub-themes	Interpretation of theme
			Although the content for this theme relates to incidental learning – the researcher saw a need for emphasising these results and as such, these are discussed as a separate theme.
Cognitive factors	Role of cognitive factors on YouTube use	Role of self-regulation	In this theme, the researcher discusses the interaction between cognitive factors and behaviour. The role played by self-regulation on the intensity of YouTube and on learning that happens on YouTube is discussed under this theme.
		Role of self-efficacy	This theme focuses on the role played by the cognitive factor – self-efficacy to benefit children's informal learning on YouTube.
		Role of outcome expectations	This theme elaborates on the role played by the cognitive factor – outcome expectations to benefit children's informal learning on YouTube.
		Role of observational learning	This theme focuses on the informal learning that occurs in children by just observing others.
		Role of reinforcements	This theme focuses on the role of reinforcement on informal learning that occurs on YouTube.

This section presented the analysis of the results obtained from the four focus groups. From the analysis of the results, four themes emerged: (1) Home environment, (2) School environment, (3) Informal learning on YouTube, and (4) The role of cognitive factors on YouTube use.

In the next section, the researcher focuses on the implication of the data by discussing in detail each of the themes and sub-themes identified to understand the benefits of using YouTube as an informal learning tool.

5.4 DISCUSSION OF RESULTS

Even though many fear that social media is not such a good idea for children, it is important to understand that children stand to benefit when they use social media. The main objective of this study is to understand how children aged 11 to 13 years benefit from using YouTube as an informal learning tool. This main objective is supported by four secondary research objectives. The first secondary research objective is to understand why children use YouTube.

In understanding the reason for using YouTube to meet the first objective, the researcher was able to determine informal learning opportunities taking place on YouTube. From the analysis it was evident that, for children, YouTube is mainly an entertainment tool and although they are ecstatic to use it, they objected to its being incorporated as part of their formal learning environment, citing distraction, lack of resources and potential addiction as some of the reasons YouTube should remain where it belongs – an informal learning space. This secondary objective is discussed in detail in Section 5.4.2. In understanding the *How*, the researcher sought to understand the environmental factors that could influence the use of YouTube. In meeting this objective, the researcher discovered that while factors such as access to the device are not an issue, access to mobile data and free Wi-Fi potentially affect the frequency and intensity of use. From the *How* it was evident that low self-regulation leads to children not knowing when to stop and potentially fearing getting addicted to YouTube. This secondary objective is discussed in detail in Section 5.4.1.

The third secondary research objective aims at understanding whether children are exposed to inappropriate content on YouTube and if they have sufficient knowledge and tools to deal with or prevent the exposure to such. In meeting this objective, it was discovered that children are exposed to inappropriate content and it is easy to be exposed to it. It was further discovered that children hope that parents are more in

control in terms of ensuring that they put measures in place to ensure that certain content is not available to children while they are on YouTube. Furthermore, the children know ways to deal with the inappropriate content, including reporting such videos to YouTube so that they can be removed from the available content. This secondary objective is discussed in detail in Section 5.4.3. The fourth and final secondary objective is understanding the types of informal learning that take place on YouTube. From the types of informal learning that are discussed in the literature (Consult Chapter 3), self-directed learning and incidental learning are the two types that have been found to be taking place among the group of children interviewed. This secondary research objective is discussed in detail in Section 5.4.2.

5.4.1 Environmental factors

In Social Cognitive Theory, “the environment is not a monolithic entity” (Bandura, 1999). Cognitive theorists distinguish between three types of environment, namely (1) imposed environment, (2) selected environment, and (3) constructed environment (Bandura, 1999b). The imposed environment can be described as the environment that is out of the individual’s control (Bandura, 1999b). For the purposes of this study, the home and school environments are classified as the imposed environment. In these environments, children do not define the rules – they abide by them. Then there is a selected environment; in this environment, the individual has a choice. Children have control over friends, both at school and in the neighbourhood. However, social media or YouTube is classified as the “constructed environment”, especially in cases where children have their own Google or YouTube accounts. In the YouTube environment, children have the ability to select what they want to see and whom they want to talk to.

From the data analysis it was discovered that the environment is a huge determinant of how children use YouTube. In the next section, the researcher discusses the environmental factors that have been identified to have an impact on informal learning that happens on YouTube.

5.4.1.1 Home environment

The analysis focusing on the SCT environmental factors identified two themes (home environment and school environment) that influence how children use YouTube. The data analysis from the home environment theme uncovered three sub-themes that have an impact on the use of YouTube by children:

(1) Ease of access to YouTube
(2) Restricted access / Parental control
(3) Monetary constraints / Cost of mobile data

One sub-theme was identified from the school environment theme:

(1) Access to YouTube during school hours

These themes and sub-themes are summarised in Table 5.3 below.

Table 5-3: Environmental Factors: Themes and sub-themes

Type of environment	Theme	Sub-theme
Imposed	**Home environment**	Ease of access to YouTube.
		Restricted access / Parental control.
		Monetary constraints / Cost of mobile data.
Imposed	**Home environment**	Access to YouTube during school hours

5.4.1.1.1 Ease of access to YouTube

The first question asked to the children was, “Do you use YouTube?” While this may sound like a rhetorical question, it was important to be asked. The researcher entered into the study with the assumption that the participants would respond with a resounding “Yes” to this question, and that is exactly what transpired. Regarding the availability of a device at home for accessing YouTube, no children from the four groups had an issue. The devices used ranged from own personal cellular phones to using the TV at home, using play stations, parents’ devices and siblings’ devices too. Some of the responses received when asked, “How do you access YouTube?” are the following

> Group 1: “We use our play stations, TV, iPads, laptops and our phones.”
> Group 2: “I use my mom’s phone.”
> Group 3: “Sometimes I use my brother’s phone.”
> Group 4: “I use my dad’s phone.”

The use of a parent or sibling’s device is more common among the younger learners like the 11-year-olds, while the older learners use their own phones and other electronic gadgets available. From the responses, it emerged that younger children, for example, the learners aged 11 still rely on either parents or siblings to have access to a device. This finding is similar to the study of Zhang-Kennedy, Mekhail, and Abdelaziz (2016) when they investigated the perceptions of children and parents regarding mobile threats; they discovered that children aged 7 to 11 years rely on sharing a mobile device with either their parents or a sibling. Furthermore, the children highlighted that all of their friends use YouTube. The availability of YouTube via friends implies that even if parents block access to YouTube, children will still find ways to access it. For example, when one participant indicated that parents could just take away the children’s phone if they watched bad videos, the response from the group was:

> Group 1: “But I don’t see why your parents could do that; for example, let’s say your parents decide to take away your phone, every second person has YouTube and I can just decide to go down the street to my friends and watch YouTube.”

Another participant added:

> Group 1: “My one friend doesn’t have a phone but he comes to ask for my phone to watch YouTube.”

Niemer (2012) supports the above view. Researchers concur that prohibiting the use of social media sites by children has been the reaction of parents who are not social media savvy and / or parents who fear the negative effects of social media (Niemer, 2012; Paraiso and Matthee, 2016). In a study conducted by Zhang-Kennedy et al. (2016) the findings are similar to those of Niemer, as the parents admitted to limiting and restricting technology use by children as they feared that they were less tech-savvy than their kids were. Furthermore, according to Zhang-Kennedy et al. (2016),

the parents feared that they would fall behind on technology and would not be able to keep up with the children and what they were up to while using social media; this made blocking and restricting access a safer choice for them. However, Niemer (2012) argues against this idea, suggesting, “Kids will simply seek social media access elsewhere − at school, the library, or friends’ homes”.

In a study conducted by Ferguson, Faulkner, Whitelo, and Sheehy (2015) on pre-teens’ informal learning with ICT and Web 2.0, they discovered that from the group of children they interviewed all the children had access to ICT and Web 2.0 at home. However, they concluded that access to a device was a challenge for the children as they shared computers with either siblings or people at home. The findings of the current study are contrary to this finding, as only two of the twenty-two children had to tell their parents what they were doing on YouTube before the parents could share the device with them. The rest of participants had easy access to a device.

Regarding the ease of access to YouTube theme, children were asked if they had their own YouTube or Google accounts that they used when accessing YouTube. These are the responses:

> Group 1: “I have my own Google account, but not YouTube account.”
> Group 3: “I use my dad’s account. You have to be over 18 years old for some of the videos.”
> Group 2: “I use a guest account.”
> Group 2: “You can’t use a guest account to download videos and watch them later so I use my sister’s account. Also the guest account doesn’t allow you to comment.”

From the responses, it is evident that the children knew the account types that are available to YouTube users and they understood how each account type works. As indicated in Chapter 3, YouTube differentiates between registered and unregistered users in terms of what the user can do. Registered users are able to “comment on videos, upload movie clips, television clips, music videos, original short videos, documentaries, animated shorts, slideshows, as well as video captured via mobile devices” (Buzzetto-More, 2014) over and above watching videos, which is the only services available to unregistered users. Eight learners had their own YouTube and

Google accounts while seven used the guest account; the remaining seven used a parent or a sibling account. These results are depicted in figure 5-6 below:

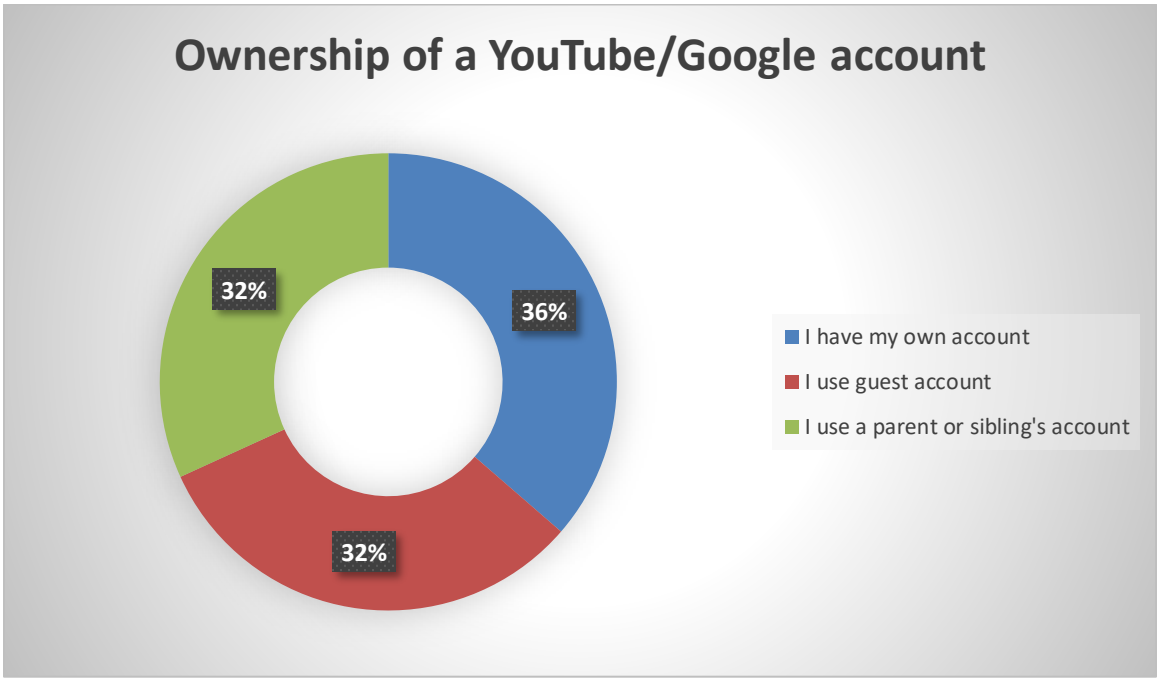

Figure 5-6: Ownership of a YouTube / Google account

When the children were asked, "How do you know all of this?" they responded as follows:

> "We just figured it out."

This is at the core of informal learning. The knowledge and the discovery of how YouTube profiles work can be described as a form of informal learning – incidental learning. According to Marsick and Watkins (2015), incidental learning occurs when the individual's aim is not learning but rather engaging on a task; in this case, watching videos for entertainment. However, through the engagement one actually learns something, namely knowing and understanding the user profile setup of YouTube. This finding is dwelt on later in Section 5.4.2 when the researcher discusses the types of informal learning taking place on YouTube for children.

The children were also asked, "Who introduced you to YouTube?" They responded as follows:

> "When I was six, I saw my brother watching videos on his phone and he asked me if I wanted to learn ABCs. I have been using YouTube since then."
>
> "I was eavesdropping on my brother and I saw YouTube."
>
> "My Mom introduced me to YouTube when we were looking for videos to help with school work."

From the results, it is evident that children have ease of access to YouTube. From the above it can be seen that the home environment does affect the use of YouTube. The results indicate that children have ease of access to a device, with most children confirming that they own devices and those who do not own a device have access to one through their parents, siblings or friends. Moreover, most of the respondents indicated that they were introduced to YouTube by either a parent, sibling or family member. For example, most learners cited watching YouTube with their parents from as young as three years old. The fact that children are introduced to YouTube at such a young age is not a surprise. In a 2013 Pew Internet Project cited in Young (2017), it is stated that "more than 30% of children under the age of 2 have used a tablet or smartphone and 75% of kids aged 8 and younger live with one or more mobile devices in the home".

In the next section, the researcher discusses restricted access / parental control as home environmental factor that influences the use of YouTube.

5.4.1.1.2 Restricted access / Parental control

In this sub-theme, the researcher aims to understand whether children are exposed to any sort of restriction in terms of what they can watch and how long they can use YouTube. These are a number of responses:

> "Yes there are restrictions; I can only watch YouTube when I am done with my homework."
>
> "Not really, like I am not the person who sits on YouTube the whole time, my mom trusts me."
>
> "There should be restrictions because there are children who are addicted to YouTube, they start lying about what they are watching."

- “Not really, but my dad checks my history.”
- “My dad will do the same for me and if he finds something bad then he will ban me for like 3 weeks , and that is really painful for me, painful.”
- “I have to tell my mom exactly what I am looking for and watching on YouTube.”

The children were also asked, “How often do you use YouTube? In a day? Week? Month? These are some of the responses:

“Every day after eating at night my mom gives me an hour.”
“Only allowed to use it once a month.”
“Once every 2 weeks.”
“3 times a week.”
“I use it every day.”

Based on the responses, it can be concluded that parental restrictions play a role in the environmental factors that influence the use of YouTube. The majority of the children had some sort of restriction imposed at home. According to Zhang-Kennedy et al. (2016), for many reasons, including fear of children being addicted to social media or children being exposed to inappropriate content, parents impose restrictions as far as technology and social media use is concerned. Based on Zhang-Kennedy et al.’s (2016) findings, the different strategies that parents use for social media restrictions can be categorised into four categories, namely (1) Account restrictions, (2) Monitoring, (3) Blocked access, and (4) Limited functionality. These categories are summarised in Figure 5-7:

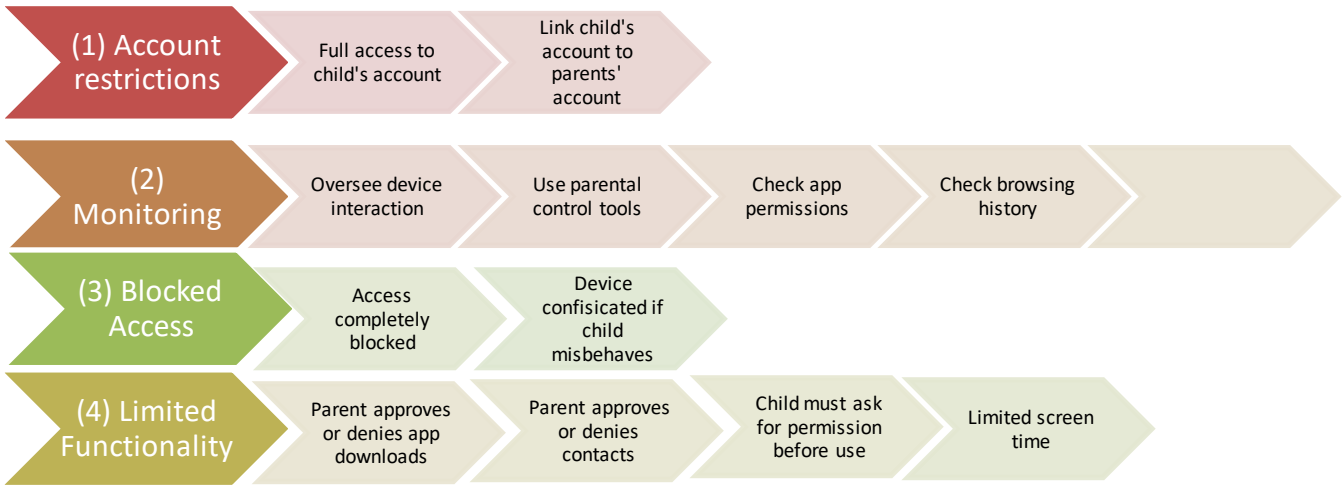

Figure 5-7: Parents' restriction strategies (Adapted from Zhang-Kennedy et al. (2016))

Monitoring and limited functionality have been found to be the most common parental restriction strategies in the current study. As can be seen from the excerpts, most children reported that parents randomly check their browser history. These findings are in line with the study conducted by Ferguson et al. (2015) as they discovered that "checking browser history was just one of the ways in which the children's ICT use was monitored". The children did not seem too worried or concerned about the fact that there were restrictions at home. The findings of Daneels and Vanwynsberghe (2017) shed some light on this as they suggest that restrictions on social media use are often common among parents of younger adolescents, i.e. those younger than 14 years of age. In addition, twelve of the twenty-two children confirmed that parents scrutinised their YouTube browser history. Ferguson et al. (2015) confirm this as they also conclude that YouTube use is one of the activities under intense scrutiny by parents.

Regarding the issue of limited functionality, some children reported that they needed to tell their parents exactly what they were watching on YouTube in order to gain access. Furthermore, although the children did not report being subject to stringent screen time restrictions, most of them felt that an hour to two hours a day was a reasonable amount of time to watch YouTube. The children also felt that anything more than the two hours borders very close to addiction. One learner noted:

"Some of my friends are like YouTube alcoholics … they watch YouTube 24/7."

The finding of Zhang-Kennedy et al. (2016) regarding the amount of time children are allowed to use YouTube is similar. In their study, they confirm that parents expressed fear of their children being addicted to their devices, resulting in their limiting the screen time to a range of "20 minutes to an hour during weekdays and a little bit longer on weekends".

These findings highlight that it is important to note that when parents choose to implement restriction or parental control strategies, the strategy itself, no matter how rigid the parents feel it is, is not as important as engaging and communicating with the child. Contrary to the idea that children hate being restricted or having parental control

while using platforms like social media, they do cooperate with their parents when they know that the controls that are put in place are for their own good. As highlighted in the study, children do not intentionally look for trouble on social media; their main reason for using social media is being entertained and having fun. Children want to feel safe while they are online and want their parents to collaborate with them in ensuring that there are proper measures in place to ensure that they are safe online. As part of self-directed and informal learning that children benefit from by using YouTube, they have mastered a great many skills, including digital literacy skills that not only help them to navigate social media but also give them the ability to review content and its appropriateness.

5.4.1.1.3 Monetary constraints / Cost of mobile data

In this sub-theme, the researcher attempts to understand whether limited access to mobile data / free Wi-Fi influences how much children use YouTube. The children were asked, “Do you think YouTube consumes a lot of data?” This question was met with a resounding response, almost like a choir from all the groups:

> “Yay.”
> “If you have Wi-Fi it doesn’t impact you, you can watch as many videos as you want.”
> “I only use Wi-Fi.”
> “The one time I had 250 megabytes data and after 30 minutes my data was finished after I had watched a video on YouTube and I said never again.”

Ferguson et al. (2015) conclude that the children’s “low personal income restricted their use of various technologies and services”. In the current study, most learners confirmed that they either relied on monthly data allowance or would only connect when Wi-Fi was turned on. In fact, most of them preferred to use their data on social media tools that are less intense on bandwidth usage like WhatsApp and Instagram. According to Ferguson et al. (2015), the limited monetary resources have a strong influence on the choice of information communications technology children tend to use.

5.4.1.1.4 Concluding summary: Home environment theme

From the Ease of access to YouTube theme, it can be concluded that both access to a device and ownership of a Google account are environmental factors that influence behaviour. Furthermore, parental restrictions have an impact on whether children use YouTube or not and how much time they spend on YouTube. Lastly, monetary resources are regarded as another environmental factor that influence the use of YouTube. Due to limited monetary resources, children do not use YouTube as much as they would prefer.

In the next section, the researcher discusses the school environment theme as another environmental factor that influences the use of YouTube.

5.4.1.2 School environment

From the school environment theme, the researcher identified one sub-theme:

(1) Access to YouTube during school hours

5.4.1.2.1 Access to YouTube during school hours

Children were asked whether YouTube should be allowed during school hours and whether YouTube should be incorporated into classroom learning. These are some responses:

> "Yes, but they [the school] must find a way to block some things."
>
> "Yes, but they must have a monitor to show what everyone is watching."
>
> "What will the kids be using to connect? Their own data or the school Wi-Fi. We don't' have access to the school Wi-Fi."
>
> "If YouTube is incorporated into the school curriculum that would force all the parents to buy devices for their kids."
>
> "The teachers do show some YouTube videos on the projectors in class. That is enough; otherwise children will be addicted and take over the projectors if they are allowed to watch YouTube."

Regarding this theme, there was consensus among all four groups, with 18 (75%) of the 22 children agreeing that YouTube should not be allowed during school hours. The

other six children (25%) were undecided, saying that perhaps it can be allowed *sometimes*. The results of how children feel about allowing YouTube during school hours are shown in Figure 5-8.

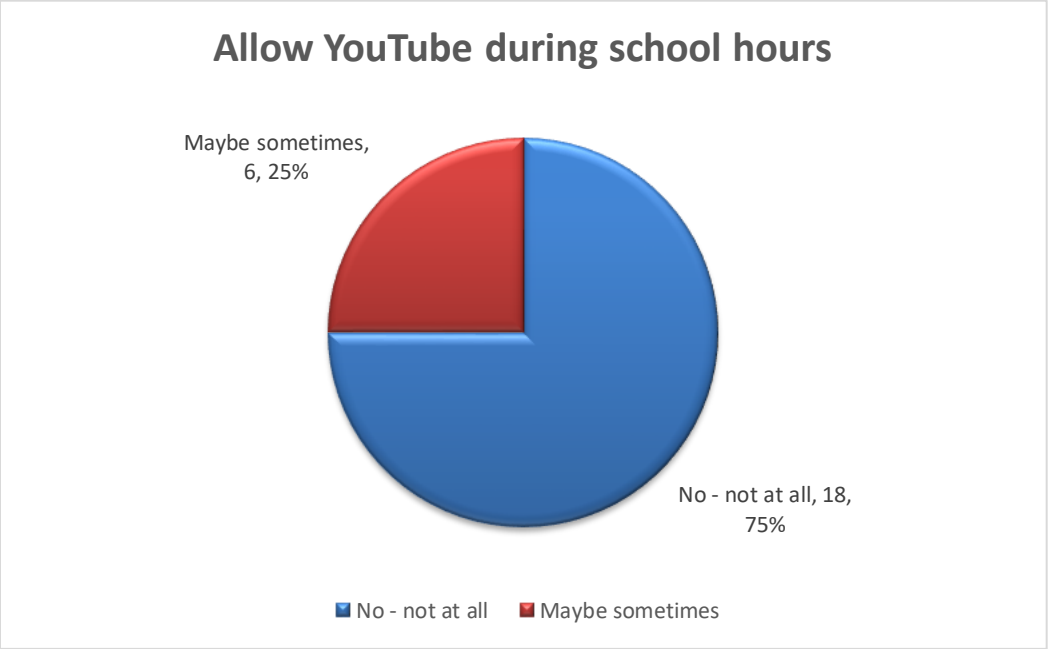

Figure 5-8: How children feel about YouTube during school hours

It is common practice in schools to block access to certain websites and mobile phone apps, particularly social media sites; schools cite such sites as being distractive, irrelevant to school and promoting inappropriate content as the main concerns for blocking (Cortesi et al., 2014). Video sharing sites like YouTube are among the content that is blocked by most schools. According to Hartley (2008) blocking access to online platforms like YouTube is almost like a default stance of how the formal education system responds to the digital era. In a study conducted by Cortesi et al. (2014), which included children aged 11 to 19, most children showed frustration at the fact that there were restrictions at school. However, a few children thought it was good that there were restrictions as social media would distract them. Interestingly however, the children in the current study advocated for YouTube to be blocked during school hours – which is the opposite result from the study conducted by Cortesi et al. (2014). Children commented that YouTube is distractive and some children were already addicted to it. In the study conducted by Ferguson et al. (2015) the participants had a similar view to the findings of this study; they thought it was good that schools block certain social media sites and YouTube is one of the sites children thought should be

blocked. They cited inappropriate content and some visuals that can feature that they should not be looking at during school hours.

Another issue the children raised concerning the access to YouTube during school hours was Internet connectivity. As indicated in Section 5.4.1.1.3, most children connected to YouTube only when there was a Wi-Fi network available to do so. The children indicated that the school had Wi-Fi available to teachers only, and the network was password-locked. If children were to be allowed to use YouTube during school hours, it would mean that they would need to connect using their own mobile data. Section 5.4.1.1.3 underscores monetary constraints and the cost of mobile data as some of the reason why children do not use YouTube as much as they would like to. These constraints continue to exist in the school environment and they might be the reason why children think there is no point in allowing YouTube at school if they are to finance the costs of connecting themselves. A future study needs to be conducted to confirm this.

Although many schools, some through the guidance of the National Department of Education, advocate blocking social media platforms during school hours and on the school premises, Bloom and Johnston (2010) have a different view on the blocking of YouTube at school. They argue, “While these new forms of media might be seen as distracting and disruptive to the academic setting, in fact, they have a great potential to change the way learning takes place”. They add that instead of abolishing YouTube from the school environment, teachers and learners should rather be taught how to use YouTube as a valuable tool. Furthermore, they emphasise that blocking YouTube access during school hours results in educators isolating themselves from the spaces in “which students are spending tremendous time and energy and in which much informal learning is taking place”.

5.4.1.2.2 Concluding summary: School environment theme

Regarding the school environment theme, children indicated a preference for the current setup where social media is blocked at school. Monetary constraints,

distractions and exposure to inappropriate content were cited as some of the reasons for not having YouTube access during school hours.

5.4.2 Behavioural Factors

As noted in Chapter 2, cognitive theorists believe that there is an “on-going reciprocal interaction” (Compeau and Higgins, 1991) between behaviour, environment and cognitive factors (Bandura, 2001b). The key principle of the on-going reciprocal interaction is that the way in which individuals view the outcomes of their actions has a direct impact on their environment and personal factors, and this in turn has an impact on behaviour that occurs at a later stage.

In the next section, the researcher discusses informal learning that happens on YouTube for children aged 11 to 13.

5.4.2.1 Informal learning on YouTube

In Chapter 3, informal learning is defined as “Learning resulting from daily life activities related to work, family, or leisure” (Straka, 2004). This type of learning is often referred to as experiential learning and at times can be understood as accidental learning (Colardyn and Bjornavold, 2004). For this type of learning, there is no structure around “learning objectives, learning time and / or learning support” (Straka, 2004). Unlike other types of learning that produce certification as a proof of learning, with informal learning there is no certification (Colardyn and Bjornavold, 2004). “Informal learning may be intentional but in most cases it is non-intentional (random or incidental)” (Straka, 2004).

The researcher employed three secondary research questions to understand the types of informal learning that take place on YouTube.

(1) **Secondary research question 1:** Why do children use YouTube?

(2) **Secondary research question 3:** Are the children aware of the risks associated with using YouTube? What tools or resources do children use to alleviate the risks?

(3) **Secondary research question 4:** What types of informal learning take place on YouTube for children?

Based on these questions, the analysis focused on the SCT behavioural factors resulted in identifying one theme and three sub-themes. The theme identified was "Informal learning on YouTube". Under this theme, three sub-themes were identified, namely (1) Self-directed learning, (2) Incidental learning, and (3) Evaluation of inappropriate content. Each of these themes is discussed next.

5.4.2.1.1 Self-directed Learning

Self-directed informal learning, also known as *explicit* learning, is the kind of informal learning that is "actively pursued and consciously acquired by the learner" (Burlington, 2016). According to Bonk, Kim, and Xu (2016) "self-directed learners want choice, control, and freedom to learn. They also want to experience some fun in the process". The children were actively using YouTube as a self-directed learning tool and they affirmed that they would recommend YouTube as a learning tool outside of school. Using YouTube was fun for the children as they indicated that they actually used it to *entertain themselves* [own emphasis]. According to Bonk et al. (2016) for self-directed learning to be meaningful, self-directed learners "want to experience some fun in the process" while learning. Over and above the requirement for learning to be fun, self-directed learners also want to have control, choice and freedom to learn in their own defined terms (Bonk et al., 2016). Barring the environmental factors that influence how children use YouTube that are discussed in Section 5.4.1 YouTube allows its users the freedom to choose how they want to learn. Below are some of the reasons the children cited when they were asked, "Why do you use YouTube?"

> "If you want to draw a picture of something, you can just Google how to draw the picture."
>
> "Sometimes if you want to get definitions or translate some words from Afrikaans."
>
> "I use YouTube to learn tricks for the sly game."

> “When I want to learn how to use my roller skates, I get a video to teach me.”
> “I watch YouTube to learn new soccer tricks.”
> “My friend uses YouTube to learn game tricks, from cheating tricks to winning tricks.”
> “I like to watch videos where they show stuff and videos that show you how to make stuff.”

The children were asked whether they had learnt any new skills from YouTube. From the responses it was evident that YouTube is a mine of learning opportunities for children:

> “Yes, definitely! Skating!”
> “DIY, making things from recycled material.”
> “I learnt how to ride my scooter.”
> “I learnt how to play soccer.”

The responses are in line with the findings of Downes (2008) suggesting, “Educational videos are widely popular within YouTube proper”. As Coyle (2018) notes, one of YouTube’s top categories is the "How to and DIY” category. In a study conducted by KKMAdmin (2018) to understand the top 12 categories of YouTube videos, the “How-to-Videos” came in second place after “Product Review” videos. The popularity of “How-to-Videos” is explained by the fact that this type of video helps their viewers understand how to perform specific tasks. When the children were asked why they preferred watching the videos on DIY rather than reading the instructions in a book, one of the responses was the following:

> “When you watch someone do something it is better than reading because you get the see the process step-by-step and you can replay the video over and over until you master what they were demonstrating.”

This type of informal learning is one of a kind as Downes (2008) affirms that “The sort of informal learning offered on YouTube varies widely, from Robert Rodriguez’s ‘10 minute cooking school’ to videos that teach hair styling and often include the kind of content students won't find in school”.

From this sub-theme, it can be concluded that children benefit from using YouTube as a self-directed informal learning tool.

5.4.2.1.2 Incidental Learning

Incidental informal learning also known as *tacit* learning is the kind of informal learning that "takes place unconsciously, through every day activities" (Burlington, 2016). Children cited entertainment as one of the main reasons for using social media or YouTube. According to Boyd (2008), teenagers are drawn to social media sites because "their friends are there" and these sites are seen as a place to "hang out". When the children were asked why they use YouTube, and if any of their friends use YouTube and for what purposes, two of the responses were:

> "We use it for entertainment."
> "Yes all of our friends use YouTube. They use it to entertain themselves."

What the children did not realise was that they were actually learning and acquiring skills unintentionally. They defined entertainment as things like (1) "watching soccer game highlights", (2) "watching music videos", (3) "playing games" and (4) "watching funny or comedy videos". While the key activity was entertainment, unconsciously they were learning soccer tricks, lyrics of songs, dancing skills and new tricks on how to excel in computer games. In a study conducted by Sefton-Green (2004) on "Literature review on Informal Learning with Technology Outside School", two particular findings are relevant to the current study. Firstly, she concluded "the "culture of games playing (the contexts, peers and surrounding texts) creates a productive background allowing for complex intellectual engagements". Secondly, when children are engaged in playing games, they have a distinct, demanding learning environment.

During the interviews the children admitted that they were actually not aware that they were learning. One of the learners, who was interested in watching music videos, thought the fact that she better understood how to dance from the videos was just a coincidence and not something that could be defined as learning. When asked if she had learnt any new skills from the music videos, her response was:

> "Not really, but now I know how to dance better"!

Another learner added:

> "You're actually right, we are learning! Now I know the lyrics of the songs by just watching the videos."

The children were very conversant in terms of how the user profile setup of YouTube works. When asked how they knew so much about YouTube, they confidently stated, "Just figuring out things". *Digital literacy*, a term coined by Gill in the 1990s, is defined as having the technical ability to navigate and engage on online platforms, understanding the pros and cons of the various information sources online and having the ability to assess information from digital sources for value, relevance and credibility (Meyers, Erickson, and Small, 2013). Furthermore, Meyers et al. (2013) suggest that not only is it crucial to possess digital literacy skills in informal learnings environments (home and community), but rather digital literacy skills are cultivated and employed in these environments. It was evident that the children possessed high levels of digital literacy skills. The children were very comfortable on YouTube, their knowledge of how to search for videos, how to clear browser history and how to remove inappropriate content was evidence of possessing high levels of digital literacy. This is something they were not taught, but learnt as they were pursuing their entertainment on YouTube. With the level of knowledge they displayed on how to use YouTube, they were quite happy to teach the novice YouTubers how to navigate. The competency of navigating social media is a form of incidental learning. According to Hattingh (2017), "Learning to be a competent computer user is also considered incidental learning as using technology is a natural response to enquiry".

Due to the participatory culture of YouTube, the researcher determined from the comments posted on the videos whether the children experienced incidental learning benefits. Although the children confirmed that they did not post many comments themselves due to the other YouTubers "being rude" regarding the comments at times, there was evidence of learning taking place through consideration of what others had to say on the comments. The comments had an influence on deciding whether to watch the video or not. Kind and Evans (2015) support this view, suggesting that

“YouTube has promising potential as a lifelong teaching tool … viewer comments can help with revision of video content”. These are some of the learner comments:

> “I only comment if the video is boring.”
> “Sometimes I post my Instagram account on the comments and people follow me.”
> “I just read through the comments. But people can be mean on the comments.”
> “I check the comments to see what people think about the video and I see if I still want to watch it or not.”
> “I also take the number of ‘likes’ into consideration to decide whether I want to see the video or not.”

Another interesting discovery regarding incidental learning was the fact the children learnt that they could not fully trust the information on YouTube, especially when they were engaged in doing school projects. This can be termed *evaluation of content*. Children were aware of cyber safety relating to information quality. The children’s ability to evaluate the information is another indication of the children’s high digital literacy skills. According to Paraiso and Matthee (2016), “digital literacy enables one to browse the Internet safely by giving one the ability to judge the quality and reliability of the information accessed and be able to make informed decisions”. Burlington (2016) agrees with Paraiso and Matthee, suggesting that, “evaluating the information found online is perhaps the most essential competency of digital literacy, particularly so for informal learning … as the Internet is unfiltered by editors”. Digital literacy is one of the critical skills children need to have in order to use YouTube safely. The responses below illustrate how the children felt about the trustworthiness of YouTube content:

> “I think there are educational videos, but the children need to watch out what they watch, there is some bad stuff.”
> “To be honest, they give misleading information sometimes, not always correct.”
> “I watch the video and then go to Google as well to verify.”

5.4.2.1.3 Evaluation of inappropriate content

Although evaluation of inappropriate content can be regarded as another form of incidental learning, the researcher saw it fit to discuss this element as a separate theme. Despite the many benefits associated with using YouTube, there is still a high likelihood that children will be exposed to inappropriate content (Downes, 2008). There is sufficient literature on the risks children face while navigating social media (Sharples et al., 2009; O'Keeffe et al., 2011). The main objective of this study, however, was not to find out whether or not children are exposed to risks when they are using social media as this has been confirmed by previous studies. In this study, the researcher focused on understanding whether children have the appropriate skills to identify inappropriate content on YouTube. Furthermore, the researcher sought to understand if children have measures in place to report and filter out inappropriate content.

It is important to note that from the conversation with the children it was evident that children mostly come across inappropriate content accidentally; they do not go out looking for it. There were only two instances where it appeared that the children were actually interested in the inappropriate content:

> "My friend is interested in videos with guns, like different types of guns."
> "There is this one child from my old school; he started watching YouTube then he said he wanted to be a weed dealer."

The children were asked if they thought it was safe for them to use YouTube. They were very much aware of the reality of the availability of inappropriate content on YouTube; as a result, most of them were caught in the middle in deciding whether it is safe or not for them to be using YouTube. Their responses were more like an "outcry" saying, "We don't want to lose all the benefits, can someone please do something about the inappropriate content!"

> "50/50. There are some messed up people in this world, they sometimes post videos that children shouldn't see."
> "I don't think it's safe."
> "It depends".

> "The thing about YouTube, you can learn bad things but you can also learn good things."

As noted in chapter 3, Livingstone and Haddon (2009) listed the following from the highest to the lowest as some of the inappropriate content / risky behaviours that children can potentially be exposed to in social media:

(1) Giving out personal information to strangers
(2) Exposure to pornographic material
(3) Exposure to violence and hateful behaviour
(4) Online bullying
(5) Receiving sexual comments
(6) Meeting online contacts offline
(7) Inability to filter illegitimate from legitimate content

Interestingly, there was only one instance where children cited giving out personal information to strangers. The one boy jokingly stated:

> "Sometimes I post my Instagram account on the comments and people follow me."

Most of the children across all the four groups cited violence and hateful behaviour as their biggest concern regarding inappropriate content on YouTube as can be seen in the following excerpts:

> "Videos of people swearing and saying stuff like that for no reason, I don't like it."
> "Like there was this game 'blue whale' where you had to commit suicide in the end."
> "Once I clicked on this video by mistake, it went up while I clicked and I clicked on the wrong video, there was a lot of swearing … I said I was never going to use YouTube after that, that video was bad, they pointed a gun at someone."
> "When you are scrolling it shows a picture of what might happen in the video. I saw something like a soccer ball. I thought it was nice and I clicked on it and it said how soccer people died, then it showed someone shooting a soccer player."
> "I saw one video a guy stabbing a girl playing tennis."
> "I once searched because I was interested, I searched World War II and it showed really disturbing things."

When the children were asked what they thought could be done to ensure that they were safe while enjoying the benefits of using YouTube; a few issues surfaced. Firstly, the children highlighted that most parents were not aware or knew what the children actually do on social media. This is a similar finding to a study conducted by Telstra on addressing the cyber safety challenge. In this study, it was discovered that although most parents claimed to be aware of their children's social media usage, teenagers claimed that this was not the case (Telstra, 2014). Paraiso and Matthee (2016) agree that most parents have no idea what their children are up to online, which results in them being unable to assist their children on issues of cyber safety. Secondly, children are more tech-savvy than their parents are. For example, regarding the issue of parents running some random audits on the browser history to see if children were viewing inappropriate content, children were already steps ahead of their parents as can be seen from the following excerpts:

> "You can click the three dots and get rid of the browser history of the bad videos that you watched."

Children also thought blocking or banning device use was not a fruitful exercise:

> "But I don't see wat your parents could do; for example, let's say your parents decide to take away your phone. Every second person has YouTube, I can just decide to go down the street to my friends and watch YouTube."

Another learner interjected:

> "My one friend doesn't have a phone but he comes and asks for my phone to watch YouTube."

A third point that the children raised was that the parents should take some responsibility to help filter out the inappropriate content. The children were asked what they thought could be done to ensure that they were safe on YouTube. Below are some of the ideas the children suggested:

(1) Parents should download videos for children and take away the rights for children to be able to download videos themselves. However, this advice was also met with some challenges, as the children noted that if they really wanted to watch other things they could always *create a second YouTube account and just not tell their parents about it.* This is idea of parents downloading videos was recommended especially for younger children.

(2) Parents could also download YouTube for kids, instead of letting children use the adult version of YouTube. However, the children noted that this is also not a 100% bullet-proof solution as can be seen from the following excerpt:

> "But there are some videos for children; the character is a kid and he has a hat and in the video he has the 'F' word and swears but they say it's for kids."
> "There is actually YouTube for children and it shouldn't show anything inappropriate.

(3) Children also suggested that the parents install filtering software that would ensure that certain videos were not returned on the search results when they looked for videos on YouTube. Added to the filtering software, children also suggested that parents must have a way of checking the history:

> "You can get an app to filter bad videos, porn, violence and that's really good."
> "So you must have a parental lock; it should be like a guest then you can't go to certain videos."
> "There is a Vodacom app, if a child deletes their WhatsApp messages, the app keeps the message and your parents can still check it. Maybe they can use that on YouTube."

(4) Finally, the children also suggested adult supervision as another measure that can be taken to minimise the exposure to inappropriate content on YouTube.

However, it is important to note that even if the above measures as suggested by the children are in place, it is no guarantee that children will never be exposed to inappropriate content. As noted by Hattingh (2017), "Children cannot always be protected from inappropriate content". It is therefore critical for parents to equip children with social media literacy skills. According to Vanwynsberghe, Boudry, and Verdegem, cited in Daneels and Vanwynsberghe (2017), social media literacy is defined as "the technical and cognitive competencies users need to use social media

in an effective and efficient way for social interaction and communication on the web". Based on the definition, *technical skills* refer to the competencies that children posses and that enable them to navigate social media (Daneels and Vanwynsberghe, 2017). Cognitive competencies refer to the children's abilities to evaluate and analyse "social media content its context, relevance, and trustworthiness" (Daneels and Vanwynsberghe, 2017). Hattingh (2017) agrees, proposing that for children to have the ability to recognise and discard inappropriate content on social media, they must be equipped with the necessary digital literacy skills. Tynes (2007) argues that when parents empower children with such skills, children are able to play "first line of defence" while using social media. To a certain degree it appeared that the children were taking responsibility to deal with inappropriate content, even without the knowledge of their parents. For example, as the researcher continued to probe what must be done to ensure their safety, they said:

> "Report the videos; send the message to the owner of YouTube to ban them."
> "The subscribers can lose their YouTube account if they post inappropriate videos. For example, there was this lowlife pimp he showed videos of him pointing guns at his mouth and then they banned him."
> "If I clicked on a bad video they (parents) don't really care, so I would just remove the video from my recommended videos by clicking on the three dots and say I am not interested."

The children referred a lot to the three dots during the interviews. The three dots are a menu option in YouTube and they allow the user to perform certain actions including reporting inappropriate videos. Figure 9-9 below depicts a visual presentation of the three dots.

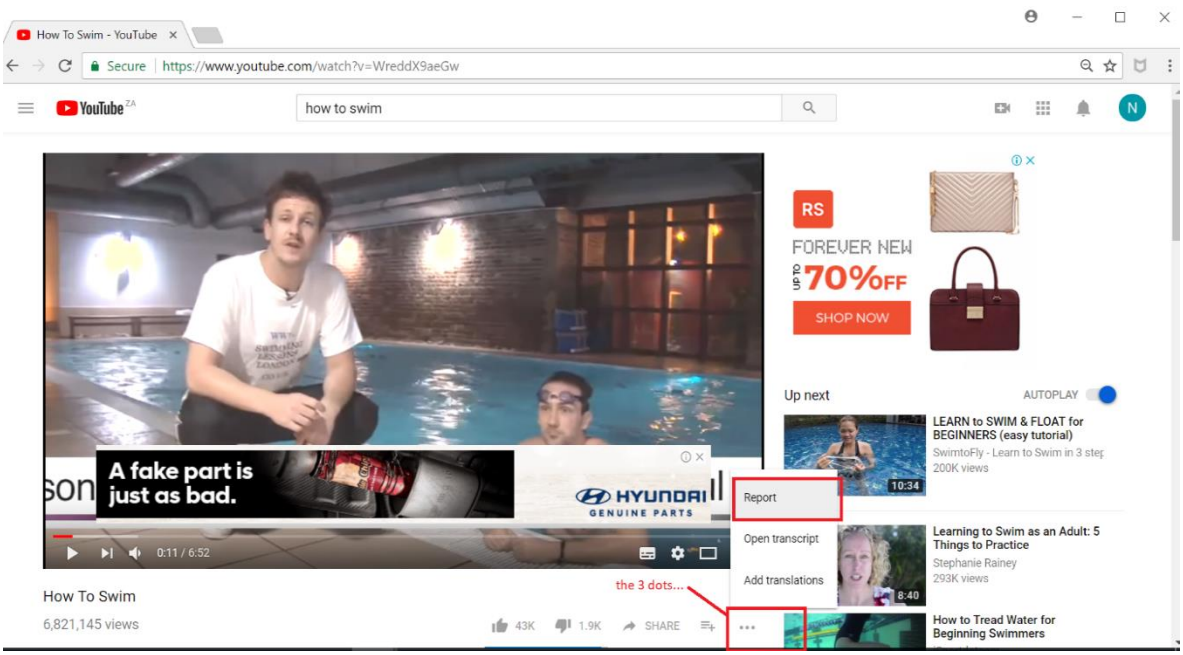

Figure 9-9: The three dots...

5.4.2.1.4 Concluding Summary: Informal learning on YouTube

From the analysis of the results, it is evident that informal learning takes place among children on YouTube. Two types of informal learning are evidently taking place – self-directed learning and incidental learning. It is also evident that with the use of YouTube children have learnt that it contains inappropriate content. The analysis also revealed that even with the tightest measures in place, there are still no guarantees that children will not be exposed to inappropriate content on YouTube. Ways to filter out inappropriate content and ensuring that children continue to enjoy the informal learning benefits on YouTube have been discussed in detail as part of this theme.

In the next section, the researcher discusses in detail the role and the impact of cognitive factors on informal learning on YouTube.

5.4.3 Cognitive Factors

In keeping with the underlying theoretical framework for this study − Social Cognitive Theory − the researcher sought to understand the impact and the role of cognitive factors on informal learning on YouTube. In Chapter 2, five main concepts of SCT

were discussed as depicted in Figure 5-8 below, namely (1) Observational Learning, (2) Self-efficacy, (3) Outcome Expectation, (4) Self-regulation, and (5) Reinforcements. In this section, the researcher focuses on the role these play in the use of YouTube by children. The quest to understand the role of cognitive factors on YouTube use was motivated by Chiu et al.' (2006) view as they suggest, "A person's behaviour is partially shaped and controlled by the influences of their environment (i.e., social systems) and the person's cognition (e.g. expectations, beliefs)".

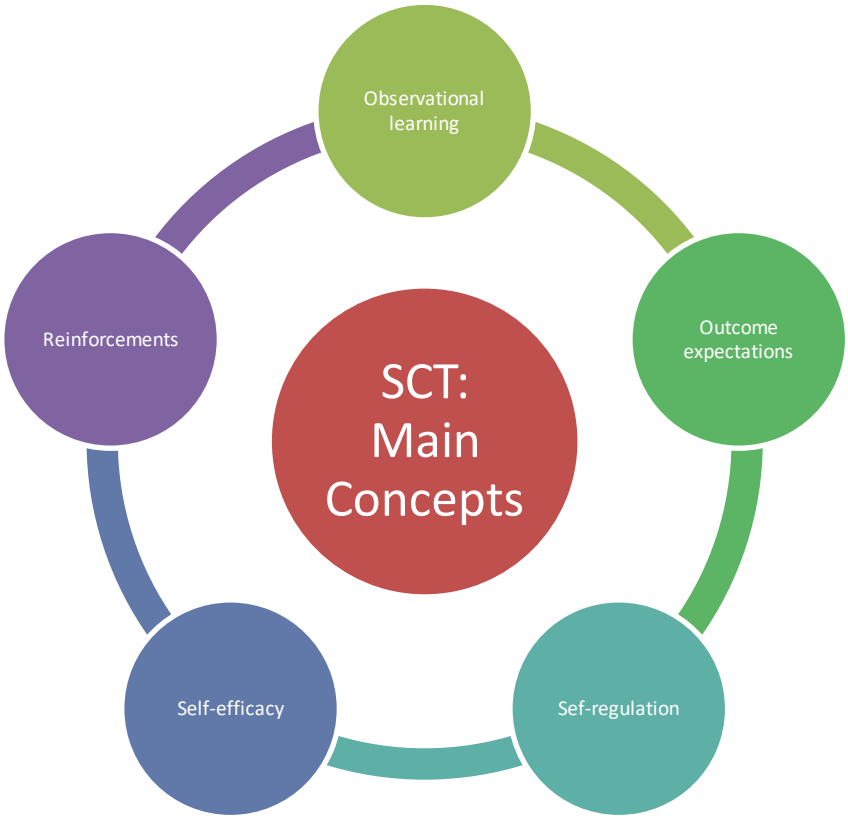

Figure 5-10: SCT main concepts

5.4.3.1.1 The role of cognitive factors in YouTube use

In this section, the researcher discussed the role of cognitive factors on YouTube use by children. Analysis will be focused on cognitive factors discussed in chapter 2, namely, (1) observational learning, (2) self-efficacy, (3) self-regulation, (4) outcome expectations and (5) reinforcements.

(1) **The role of observational learning:** As stated in preceding chapters, the principle of OL is that individuals have the capability of learning from the experiences of others just as much as they learn from their own experiences. As the children affirmed that through watching YouTube videos, they learnt dancing skills, soccer tactics and game tricks there is clear evidence that observational learning plays a crucial role on informal learning on YouTube. Not only OL was evident in the children watching the videos on YouTube; some of the children cited observational learning as one of the ways in which they got to know about YouTube and how to use it. For example, when the children were asked who introduced them to YouTube, some of the responses were the following:

"I watched my sister use it."

"My mom showed me."

(2) **The role of self-efficacy**: Self-efficacy is defined as "beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments" (Bandura, 1997). Self-efficacy for social media use assesses children's belief in their ability to navigate and use social media with ease. When children believe in their capabilities to navigate and search for information on YouTube, they are encouraged to use YouTube frequently. Low self-efficacy may result in children avoiding to use social media due to fear of failure. In the analysis of the results, there was no indication of low self-efficacy among the children. They had extreme confidence in their capability to use and navigate YouTube. Even when they were asked if they would be comfortable to teach someone who has not used YouTube before, they replied in the affirmative. The children also indicated that even if they did not know how to use YouTube, they would just go on YouTube and search for a video on "How to use YouTube".

(3) **The role of self-regulation**: Self-regulation is the component of SCT that deals with controlling the intensity of use of social media. When self-regulation is low, people tend to get addicted to social media as they lack the cognitive ability to control the use of social media. Due to the fascination brought by social media, it is easy for children to be carried away, which may decrease the levels of self-

regulation. According to O'Keeffe et al. (2011), a low level of self-regulation and susceptibility to peer pressure expose children to certain risks as they navigate social media. The children were asked if they thought YouTube was addictive and whether they knew when to stop. The following extracts illustrate how the children responded:

> "You say you want to see one video, then you see another, then you also want to watch it."
> "Like I search something for homework and then I see something else, then I get distracted."
> "The only time you cannot be addicted and stop watching is when the message comes in that you are running out of data."
> "My brother is addicted; it's really not funny, he got a play station for his birthday and ever since then gained a lot of weight because he was using it 24/7 ... he refuses to even go for a walk with my parents."
> "I don't go full screen so that I can see which videos I will watch next – there is this one game [sly] its addictive, children are always playing that on YouTube."
> "There are kids who are addicted to YouTube and they start lying about what they are watching."
> "My friends are like YouTube alcoholics, they watch it 24/7."

From the responses of the children it was evident that self-regulation is a concern. Low self-regulation seemed more present among the girls compared to boys in all the groups. For example, when children were asked whether they considered the recommended videos or they would only look at what they actually searched for, the responses differed between boys and girls across the four groups. Boys reported being more in-control of what they watch on YouTube; they only watch at what they have searched for, whereas girls reported that they also look at the recommended videos. It is recommended that where children have access to uncapped Wi-Fi, parents should take on the responsibility to ensure that the Wi-Fi is not open and accessible 24/7 but only during certain periods to help children regulate their use of YouTube.

(4) **The role of outcome expectations**: Learning and motivation are affected by perceived consequences of behaviour, as people tend to work towards reaching the expected outcome and in the process shun the undesired outcome (Schunk, 2012). In view of the current study, OE can be viewed as the SCT element that determines the use of social media. If children or even parents expect that by using YouTube they will gain certain benefits, e.g. entertainment, making new (good) friends, then it is highly likely that they will prefer to make more use of YouTube. On the other hand, if the perceived outcome expectation is that children will be exposed to the wrong crowd, inappropriate content and risky behaviour, then it is highly likely that social media use will be avoided. From the results it is evident that the expectation to benefit exceeded the expectation that there might be exposure to inappropriate content, and as a result, the children had the urge and the desire to use YouTube regularly.

(5) **The role of reinforcement**: The emphasis on reinforcement in learning implies that individuals will increase behaviour that results in positive outcomes decrease whatever has resulted in a negative outcome; in other words, individuals learn from the consequences of their actions (Raingruber, 2013; Cheung et al., 2015). It was not possible to find physical evidence that supports the role of reinforcement on informal learning on YouTube from the data. The researcher believes that this can be explored for future study.

5.4.3.1.2 Concluding summary: The role of cognitive factors on YouTube use

In this theme, the researcher sought to understand the role played by cognitive factors on how children learn on YouTube and in their use of YouTube. From the analysis of the results, it is evident that cognitive factors play a significant role in children's use of YouTube. Self-regulation plays a significant role in controlling the intensity of use. It was evident that the lower the levels of a learner's self-regulation, the higher the intensity of use and vice versa. Self-efficacy plays a crucial role in the confidence of the children in terms of their abilities to use and navigate on YouTube. The results reveal that children have high levels of self-efficacy. Outcome expectations are another factor of SCT that plays a role in the use of YouTube. Children have high

expectations of entertainment on YouTube, which results in their constantly using YouTube to entertain themselves. Finally, through observational learning, the children not only learn how to use YouTube but they also acquire different skills from watching YouTube videos.

5.5 CONCLUSION

In this chapter, the researcher looked at the collected data in relation to the secondary research objectives that are articulated in Chapter 1 to assist the researcher tin realising the main objective of the current study. From the data collected, four themes were identified using the thematic analysis. The themes identified were mapped back to the secondary research objectives. Social Cognitive Theory was used as the underlying framework to identify the themes in the data. Table 5-4 gives a summary of the findings from the data analysis.

Table 5-4: Concluding Summary: Data Analysis and Presentation of Results

Concluding summary: Data analysis	
Theme 1: Home Environment	From the data analysis it can be concluded that both access to a device and ownership of a Google account are environmental factors that influence behaviour – use of social media that in turn influences informal learning on YouTube. Furthermore, parental restrictions have an impact on whether children use YouTube or not and how much time they spend on YouTube. It is also important to note that when parents choose to implement restriction or parental control strategies the strategy by itself, no matter how rigid the parents feel it is, is not as important as engaging and communicating with the children. Contrary to the idea that children hate being restricted or having parental control while using platforms like social media, they will cooperate with the parents when the children are involved and they know that the controls put in place are for their own good. As highlighted in the study, children do not go looking for trouble on social media – their main purpose for using social is entertainment and to have fun. Children want to feel safe while they are online and they want their parents to collaborate with them in ensuring that there are proper measures in place to ensure that

Concluding summary: Data analysis	
	they are safe online. As part of self-directed and informal learning that children benefit from by using YouTube, they have learnt a great deal of skills, including digital literacy skills that not only help them to navigate social media but also give them the ability review content and its appropriateness for them. Lastly, monetary resources are regarded as another environmental factor that influences the use of YouTube. Due to limited monetary resources, children do not use YouTube as much as they prefer.
Theme 2: School Environment	From this theme's analysis, it was evident that children understand the addictive nature of YouTube. There was consensus among all four groups, with 18 out of the 22 children agreeing that YouTube should not be allowed during school hours. The other six children were undecided on this matter saying that perhaps it can be allowed sometimes. Schools block access to YouTube for reasons such as distraction and protecting children from exposure to inappropriate content. However, Bloom and Johnston (2010) have a different view on the blocking of YouTube at school, arguing that "While these new forms of media might be seen as distracting and disruptive to the academic setting, in fact, they have a great potential to change the way learning takes place". They further suggest that instead of abolishing YouTube from the school environment, teachers and learners should be taught how to use YouTube as a valuable tool. Furthermore, they emphasise that blocking YouTube access during school hours results in educators isolating themselves from the spaces in "which students are spending much time and energy and in which much informal learning is taking place".
Theme 3: Informal learning on YouTube	From the analysis of the results, it is evident that informal learning takes place among children on YouTube. Two types of informal learning are evidently taking place – self-directed learning and incidental learning. It is also evident that with the use of YouTube, children have learnt that there is inappropriate content on YouTube. Digital literacy skills are some of the skills children acquire incidentally while using YouTube. The analysis has also revealed that even with the tightest measures in place, there are still no guarantees that children will not be exposed to inappropriate content on YouTube. Ways to filter out inappropriate

Concluding summary: Data analysis	
	content and ensuring that children continue to enjoy the informal learning benefits on YouTube are discussed in detail as part of this theme.
Theme 4: The role of Cognitive factors in YouTube use	In this theme, the researcher sought to understand the role played by cognitive factors in how children learn on YouTube and their use of YouTube. From the analysis of the results, it is evident that cognitive factors play a significant role in the children's use of YouTube. Self-regulation plays a significant role in controlling the intensity of use. It is evident that the lower the learner's levels of self-regulation, the higher the intensity of use and vice versa. Self-efficacy plays a crucial role in the confidence of the children in terms of their ability to use and navigate on YouTube. The results have revealed that children have high levels of self-efficacy. Outcome expectations are another factor of SCT that plays a role in the use of YouTube. Children have high expectations of entertainment on YouTube that result in their constantly using YouTube to entertain themselves. Finally, through observational learning, the children not only learn how to use YouTube but they also acquire different skills from watching YouTube videos.

The conclusion to the research is presented in the next chapter.

6 CHAPTER 6: RESEARCH CONCLUSION

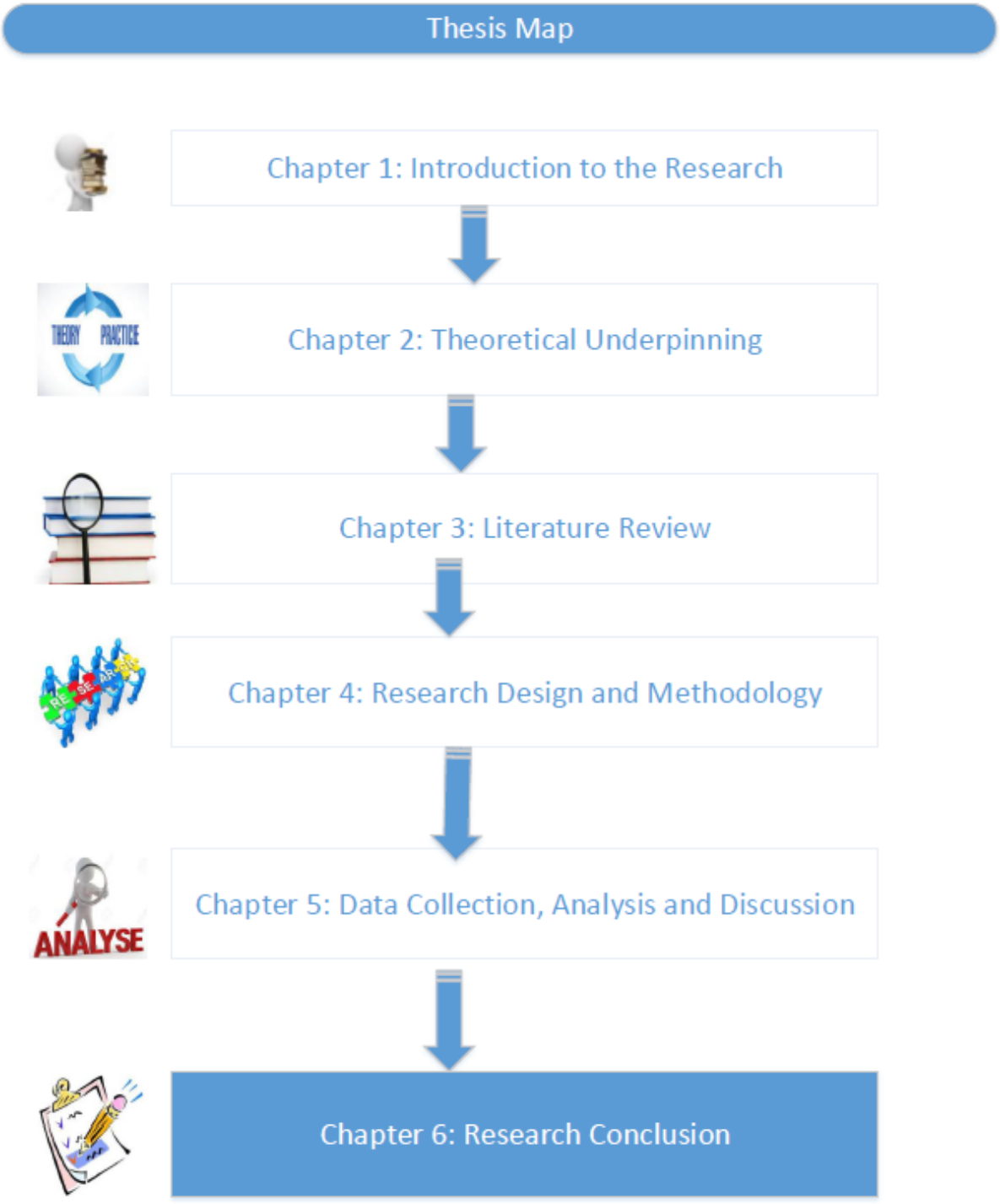

Figure 6-1: Thesis map

6.1 INTRODUCTION

The aim of this study is to determine the benefits of using social media (YouTube) as an informal learning tool for children aged 11 to 13 years. To achieve this aim, a main research question together with secondary research objectives / questions were formulated:

Main research question: "How do children aged 11 to 13 years benefit from using YouTube as an informal learning tool?"

Secondary research question 1: "Why do children use YouTube?"

Secondary research question 2: "How do children use YouTube?

Secondary research question 3: "Are the children aware of the risks associated with using YouTube? What tools or resources do the children use to alleviate the risks?

Secondary research question 4: "What types of informal learning take place on YouTube?"

In the following section, the researcher details how the above questions were answered to meet the objectives of the study.

6.2 ANSWER TO RESEARCH QUESTIONS

6.2.1 Secondary research question 1: "Why do children use YouTube?"

In meeting this secondary research objective, the research indicates that the main reason children use YouTube is for entertainment. YouTube is a place where they hang out and engage in activities that are fun to them. The activities that children engage in include the following categories: watching music videos, game highlights, vlogs, comedy videos, playing games, how to and DIY videos, vines, and soccer videos. Two themes emerged from the data obtained from this research objective, namely "Informal learning on YouTube" and "The Role of Cognitive Factors in

YouTube Use". These themes were discussed in detail in sections 5.4.2.1 and 5.4.3.1.1.

6.2.2 Secondary research question 2: "How do children use YouTube?"

In meeting this secondary research objective, the research has indicated that as expected, children have ease of access to devices that allow them to use YouTube. Most children own devices with only the younger children still relying on sharing the device with their parents or siblings. From the data obtained, it is evident that children have a good understanding of how the YouTube platform works and are quite comfortable to navigate on their own without adult supervision. Restricted access and monetary constraints that translate to a lack of funds to buy data are some of the constraints that influence how often children used YouTube. However, it has also been discovered that the children are not keen on YouTube being open or accessible during school hours, as they fear that this would bring distractions to the school environment. However, outside of school, they hope that parents will give them more time to enjoy YouTube. Two themes emerged from this data, namely home environment and school environment. There is concrete evidence that the home environment plays a crucial role in how children use YouTube. These themes were discussed in detail in sections 5.4.1.1 and 5.4.1.2.

6.2.3 Secondary research question 3: "Are children aware of the risks associated with using YouTube? What tools or resources do children use to alleviate the risks?"

In meeting this secondary research objective, the research has indicated that when children use YouTube, there is a possibility of being exposed to inappropriate content. However, the data analysis also highlights that instead of blocking access to YouTube, which will result in children missing the informal learning opportunities available on YouTube, parents should equip the children with the necessary digital literacy skills to be able to filter out inappropriate content on their own. It is also evident that children, to a certain degree, possess the necessary digital literacy skills that allow them to play "first line of defence" in filtering out inappropriate content. The data analysis, however,

has revealed that children are concerned that some parents do not have an idea of what exactly their children encounter on social media. Lack of digital literacy skills may be cited as a reason for the parents not really being fully informed this regard. A further study needs to be conducted to confirm this. From the data analysis, it can be deduced that children have the necessary skills to evaluate legitimacy of data on YouTube, particularly when they use the data to complete school projects; children are aware that there is little or no editing of the content on YouTube. “Evaluation of inappropriate content” emerged as the main theme from the data collected based on this secondary objective. The “evaluation of inappropriate content” is in itself seen as another form of informal learning – incidental learning. This theme was discussed in detail in section 5.4.2.1.3

6.2.4 Secondary research question 4: "What types of informal learning take place on YouTube for children?”

In meeting this secondary research objective, the research has indicated that there are many informal learning opportunities and benefits for children on YouTube. Learning is so embedded in the children’s day-to-day activities that it is not easy even for them to realise that by performing their fun activities they are actually learning. Self-directed learning and incidental learning have been identified as the two types of informal learning that are currently taking placing among children on YouTube. The informal learning skills that children acquire from using YouTube are skills that they do not necessarily regard as formal learning. “Informal learning on YouTube” emerged as the main theme from the data analysis. This theme was discussed in detail in sections 5.4.2.1.1 and 5.4.2.1.2.

6.2.5 Primary research question: How do children aged 11 to 13 benefit from using YouTube as an informal learning tool?

The secondary research questions were formulated to assist the researcher in answering the main research question. In answering all four secondary research questions, the researcher can deduce that the main research question has been

answered. From the results, it was evident that children aged 11 to 13 years benefit from using YouTube as an informal learning tool in the following ways:

- The research evidence indicated that there are two types of informal learning that are evidently taking place while children are using YouTube – self-directed learning and incidental learning. DIYs, soccer skills and assistance with school projects are some of the skills that children developed through self-directed learning on YouTube. On the other hand, it was also evident that although many children are using YouTube for entertainment, incidental learning is taking place.
- It was also evident that with the use of YouTube, children have learnt that there is inappropriate content on YouTube.
- Furthermore, it was also evident that digital literacy skills are some of the skills children acquire incidentally while using YouTube. These skills amongst other things are helping children play first line defence while using social media and this is especially critical when children come across inappropriate content.

It can be concluded that the current study has met the research objectives and thus contributes to the IS field on an academic and practical level.

6.3 EVALUATION OF THE CONTRIBUTION TO THE BODY OF KNOWLEDGE

This study contributes to the field of IS on an academic and practical level.

- **Academic contribution**: The study underscores the fact that children benefit by using YouTube. By using YouTube, children enjoy self-directed and incidental learning benefits that they may not have been exposed to had they been prevented from using social media. Both cognitive and environmental factors play a crucial role in how children use YouTube.
- **Methodological contribution**: The use of face-to-face focus groups interviews underpinned by a survey research strategy contributes methodological to the IS field. The focus groups were very effective in helping the researcher to understand the benefits of using YouTube as an informal learning tool by children aged 11 to 13. The use of Social Cognitive Theory as a theoretical

framework for the study was beneficial in understanding the factors that influence how children use YouTube.

- **Practical contribution**: The findings of this study should enlighten parents and those who have children in their care regarding the benefits of using YouTube as an informal learning tool. The study highlights the need for parents to be involved in their children's digital world by understanding exactly what it is that they actually do on social media. Parents need to be aware that exposure to inappropriate content on YouTube is a real threat; however, this should not be used as the reason to ban or block such tools as they have educational benefits. It is a fact that children are more tech-savvy than most parents are and parents need to work on ways to keep up and ensuring that they keep their children safe on the net. Filtering software is one such tool that parents can implement to ensure that they protect their children from exposure to inappropriate content. It has been noted that parents may not always possess the necessary digital literacy skills to manage filtering software and other methods to protect children from inappropriate content. A partnership between schools, parents and children is encouraged. Schools can present educational talks on how to use social media.

6.4 RIGOUR AND POSSIBLE FUTURE RESEARCH

According to Ferguson et al. (2015), it is important that the researcher consider both rigour and the limitations of the study before considering its significance in relation to practical implications and future research. To understand rigour for the current study, the researcher adopted Lincoln and Guba's most common criteria used to evaluate qualitative research as cited in Cope (2014). Lincoln and Guba suggest that to evaluate a qualitative study, the researcher should apply criteria that include credibility, dependability, confirmability and transferability:

- **Credibility**: "Credibility refers to the value and believability of the findings" (Houghton, Casey, Shaw, and Murphy, 2013). For the current case study, unstructured interviews with pre-defined questions to help guide the conversation were conducted with the participants from the four focus groups. During the second last interview no new concepts emerged from the

conversations and this was an indication that data saturation had been achieved.

- **Dependability**: “Dependability refers to the constancy of the data over similar conditions” (Cope, 2014). For the current study, dependability can be confirmed through the process coding and theme extraction that took place. The researcher ensured that the themes identified were not just ideas of one individual, but rather a number of participants held the same opinion.
- **Confirmability**: “Confirmability refers to the researcher’s ability to demonstrate that the data represents the participants’ responses and not the researcher’s biases or viewpoints” (Cope, 2014). For each theme and sub-theme that was identified during the analysis, an excerpt from the raw data was quoted as evidence that the findings represent the viewpoint of the participants.
- **Transferability**: “Transferability refers to whether or not particular findings can be transferred to another similar context or situation, while still preserving the meanings and inferences from the completed study” (Houghton et al., 2013). In this study, the researcher used a very small, significant purposive sample and in turn, this posed a limitation on the generalisation and transferability of the findings of the study.

The limitations on the transferability of the research findings are a justification for future study that would include a larger sample as the current study focuses on a very small significant purposive sample only. Furthermore, the findings of the current study have revealed that children prefer that their parents to take on the responsibility of installing filtering software on the devices they use to access YouTube to ensure that they continue to enjoy its benefits without having to worry about exposure to inappropriate content. A further study aimed at understanding whether parents possess sufficient digital literacy skills to fulfil this expectation could be conducted. The current study focuses on YouTube as the social media platform. Children indicated WhatsApp and Instagram as other social media platforms they preferred using. A broader assessment of other social media platforms for a comprehensive understanding of using social media as an informal learning tool for children should be conducted. Children indicated that they were happy with the restrictions placed on using YouTube at schools. A study to understand what cognitive and environmental factors influenced this point of view can be conducted.

6.5 CONCLUDING REMARKS

This study attempts to understand the benefits and factors that influence the use of YouTube as an informal learning tool by children aged 11 to 13 years. Undoubtedly, “we have entered a new era of learning” (Bonk et al., 2016). Information and Communication Technologies (ICTs) form an integral part of people’s daily lives. Since the introduction of Web 2.0 technologies, the ways in which children learn have evolved and are continuing to evolve. Social media is gaining popularity with children and it is important that we begin to embrace and understand how the use of social media platforms affects children. The current study underscores self-directed and incidental learning as most common informal learning opportunities for children on YouTube.

Answers to the main and secondary research questions of the current study are presented and discussed in this chapter. The theoretical, methodological and practical contributions of the current study to the body of knowledge are also presented in the current chapter. Possible future research topics are also presented in this chapter.

APPENDIX A – INTERVIEW GUIDE

Benefits of Using Social Media as an Informal Learning Tool for Children: A YouTube Case Study

Section 1: Details of Interview

Date of Interview: _____

Time of Interview: _____

Venue: _____

Number of members in focus group: _____

Focus group name: _____

Total Duration of Interview (minutes): _____

Section 2: Demographic Details

Gender:

# of male learners

# of female learners

Ethnic group:

# of Black learners

# of White learners

# of Indian learners

# of Coloured learners

# of other learners

Age:

# of learners aged 10

# of learners aged 11

# of learners aged 12

# of learners aged 13

# of learners aged 14+

Number of Learners in Grade 5 (in 2018)

_____

Number of learners in Grade 6 (in 2018) _____

Number of learners in Grade 7 (in 2018) _____

Section 3: YouTube as a learning tool

[1]The groups will be asked to either **"***Show how they learn on YouTube***"** or **"***Tell how / what they learn on YouTube".* During the session the researcher will be sourcing answers to the following questions:

1. **How children use YouTube :**
    a. Do you use YouTube?
    b. Do you have access to YouTube? If so, how do access YouTube?
    c. Do you own a smartphone / mobile device?
    d. How do you access the Internet? Do you use your smart phone or home pc / internet café?
    e. Do you have your personal YouTube and Google accounts?
    f. If yes, what do you use it for?
    g. Do you think YouTube consumes much data? Would that have an impact on how often you use YouTube? Do you have limited access to data? Do you buy your own data or use Wi-Fi at school / home?
    h. How often do you use YouTube? In a day? Week? Month?
    i. When did you start using YouTube? At what age? How long have you been using YouTube?
    j. Do any of your friends use YouTube? What do they use it for?

2. **Why do Children use YouTube? Learning Opportunities on YouTube:**
    a. What benefit do you get from using YouTube?
    b. Do you think children in general can benefit from using YouTube?
    c. Do you access only what you want or do you click on what other people have viewed on YouTube?
    d. Do you think YouTube can help with school-related work?
    e. Have you learnt any new skills from YouTube?

[1] The data was collected using focus groups. Although the researcher covered all the questions listed in this section during the interview, the questions might not have been asked in a particular order.

f. Would you recommend the use of YouTube as a learning tool?
g. What content of YouTube are you interested in?
h. Elaborate on your choice in question g.
i. What content is most interesting / appealing to you on YouTube?
j. Did anyone teach you how to use YouTube? How did you learn about YouTube? Who introduced you to it?

3. Security risk on YouTube for children:

a. Do you think it is safe for children to use YouTube? Elaborate.
b. Have you ever been exposed to inappropriate content on YouTube? Elaborate.
c. Do you think it is easier for children to see inappropriate content on YouTube?
d. What do you think can be done to ensure children are safe on the Internet, particularly on YouTube?
e. Are there any restrictions on what you can search for and see on YouTube?
f. Can you watch or use YouTube on your own or do you need adult supervision?
g. Are there any restrictions on the use of YouTube at school? Why?
h. Do you think children should be allowed open access to YouTube without any restrictions?

APPENDIX B – INFORMED CONSENT FORM

Benefits of Using Social Media as an Informal Learning Tool for Children: A YouTube Case Study

I ……..the (parent / legal guardian) of……. hereby voluntarily grant permission for my child to participate in the project as explained to me by

……

The nature and objectives of the research have been explained to my child and me and I fully understand the purpose of participation and feel comfortable with the kind of information that will be required from the participants. I understand my right to choose to sit in during the interview or nominate someone who can sit in on my behalf should I not be able to attend the interview for some reason.

I understand my right to choose whether my child can participate in the project and have been assured that the information furnished will be handled with confidentially.

I have also been informed of the need and purpose of the recording of the interview and the anonymous citation of the participants' statements in publications. I understand my right to choose whether to permit these proceedings.

I understand that participants can withdraw at any time without giving reasons and that they will not be penalised for withdrawing nor will they be questioned why they have withdrawn.

Participant:

_____ _____ _____

Name of Parent/Legal Guardian Signature Date

Researcher:

_____ _____

Signature Date

RESEARCH ETHICS COMMITTEE

Tel: +27 12 420 3395
E-mail: ronel.rensburg@up.ac.za

APPENDIX C – ETHICAL CLEARANCE

23 November 2017

Dr MJ Hattingh
Department of Informatics

Dear Doctor Hattingh

The application for ethical clearance for the research project described below served before this committee on 21 November 2017.

Protocol No:	EMS045/17
Principal researcher:	**NF Dyosi**
Research title:	Using YouTube as an Informal Learning Tool for Children
Student/Staff No:	26309565
Degree:	M.Com (Informatics)
Supervisor/Promoter:	Dr MJ Hattingh
Department:	Informatics

The decision by the committee is reflected below:

Decision:	Approved
Conditions (if applicable):	None
Period of approval:	November 2017 – October 2018

The approval is subject to the researcher abiding by the principles and parameters set out in the application and research proposal in the actual execution of the research. The approval does not imply that the researcher, student or lecturer is relieved of any accountability in terms of the Codes of Research Ethics of the University of Pretoria if action is taken beyond the approved proposal. If during the course of the research it becomes apparent that the nature and/or extent of the research deviates significantly from the original proposal, a new application for ethics clearance must be submitted for review.

Please convey this information to the researcher. We wish you success with the project.

Sincerely

pp PROF RS RENSBURG
CHAIR: COMMITTEE FOR RESEARCH ETHICS

cc: Prof C de Villiers
Student Administration

APPENDIX D – GAUTENG DEPARTMENT OF EDUCATION

GAUTENG PROVINCE
Department: Education
REPUBLIC OF SOUTH AFRICA

8/4/4/1/2

GDE RESEARCH APPROVAL LETTER

Date:	**14 March 2018**
Validity of Research Approval:	**05 February 2018 – 28 September 2018** **2017/394**
Name of Researcher:	**Dyosi N.F**
Address of Researcher:	**472A Brittlewood Avenue**
	Thatchfield Glen
	Centurion 0157
Telephone Number:	**072 896 1799**
Email address:	**neliswa.mnukwana@gmail.com**
Research Topic:	**Benefits of Using Social Media as an Informal Learning Tool for Children: A YouTube Case Study**
Type of Degree:	**Masters of Commerce**
Number and type of schools:	**One Primary School**
District/s/HO	**Tshwane South**

Re: Approval in Respect of Request to Conduct Research

This letter serves to indicate that approval is hereby granted to the above-mentioned researcher to proceed with research in respect of the study indicated above. The onus rests with the researcher to negotiate appropriate and relevant time schedules with the school/s and/or offices involved to conduct the research. A separate copy of this letter must be presented to both the School (both Principal and SGB) and the District/Head Office Senior Manager confirming that permission has been granted for the research to be conducted.

14/03/2018

The following conditions apply to GDE research. The researcher may proceed with the above study subject to the conditions listed below being met. Approval may be withdrawn should any of the conditions listed below be flouted:

Office of the Director: Education Research and Knowledge Management
7th Floor, 17 Simmonds Street, Johannesburg, 2001
Tel: (011) 355 0488
Email: Faith.Tshabalala@gauteng.gov.za
Website: www.education.gpg.gov.za

1. *The District/Head Office Senior Manager/s concerned must be presented with a copy of this letter that would indicate that the said researcher/s has/have been granted permission from the Gauteng Department of Education to conduct the research study.*
2. *The District/Head Office Senior Manager/s must be approached separately, and in writing, for permission to involve District/Head Office Officials in the project.*
3. *A copy of this letter must be forwarded to the school principal and the chairperson of the School Governing Body (SGB) that would indicate that the researcher/s have been granted permission from the Gauteng Department of Education to conduct the research study.*
4. *A letter / document that outline the purpose of the research and the anticipated outcomes of such research must be made available to the principals, SGBs and District/Head Office Senior Managers of the schools and districts/offices concerned, respectively.*
5. *The Researcher will make every effort obtain the goodwill and co-operation of all the GDE officials, principals, and chairpersons of the SGBs, teachers and learners involved. Persons who offer their co-operation will not receive additional remuneration from the Department while those that opt not to participate will not be penalised in any way.*
6. *Research may only be conducted after school hours so that the normal school programme is not interrupted. The Principal (if at a school) and/or Director (if at a district/head office) must be consulted about an appropriate time when the researcher/s may carry out their research at the sites that they manage.*
7. *Research may only commence from the second week of February and must be concluded before the beginning of the last quarter of the academic year. If incomplete, an amended Research Approval letter may be requested to conduct research in the following year.*
8. *Items 6 and 7 will not apply to any research effort being undertaken on behalf of the GDE. Such research will have been commissioned and be paid for by the Gauteng Department of Education.*
9. *It is the researcher's responsibility to obtain written parental consent of all learners that are expected to participate in the study.*
10. *The researcher is responsible for supplying and utilising his/her own research resources, such as stationery, photocopies, transport, faxes and telephones and should not depend on the goodwill of the institutions and/or the offices visited for supplying such resources.*
11. *The names of the GDE officials, schools, principals, parents, teachers and learners that participate in the study may not appear in the research report without the written consent of each of these individuals and/or organisations.*
12. *On completion of the study the researcher/s must supply the Director: Knowledge Management & Research with one Hard Cover bound and an electronic copy of the research.*
13. *The researcher may be expected to provide short presentations on the purpose, findings and recommendations of his/her research to both GDE officials and the schools concerned.*
14. *Should the researcher have been involved with research at a school and/or a district/head office level, the Director concerned must also be supplied with a brief summary of the purpose, findings and recommendations of the research study.*

The Gauteng Department of Education wishes you well in this important undertaking and looks forward to examining the findings of your research study.

Kind regards

.....

Ms Faith Tshabalala
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DATE: 14/03/2018

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