Exploring Adolescent Smartphone Dependence:
The Case of an International High School in Myanmar.

by

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Abstract

The research project evolved from my concerns and those of parents and teachers about students' inability to regulate their smartphone use in schools. A preliminary review of literature revealed growing concerns worldwide about adolescent smartphone dependence which was affecting students' academic and social development, amongst many others. It also revealed the area of adolescents' smartphone dependence to be scantly researched especially in developing countries. Hence, this study. The purpose of the study was to explore levels of smartphone dependence in adolescents at a private school in Myanmar. The study was set in a social constructivist framework and the methodology was qualitative in nature, incorporating a literature review. Participants were purposively selected. Data was collected through semi-structured interviews, observations, focus group discussions and questionnaires. The study found that the level of smartphone use at the school was a cause of concern for the stakeholders; adolescents at the target school could be considered dependent on their smartphones. Recommendations to reduce the adolescents' total screen time were made. Further studies into the management of children's smartphone use were recommended.

Key words: Adolesence, smartphones, dependence, case study, explorative, qualitative approach, purposive sampling, semi-structured interviews, focus group discussion, Myanmar.

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EXPLORING ADOLESCENT SMART PHONE DEPENDENCE

Chapter 1:Introduction and Background to the Study

1.1 Introduction

"Every once in a while, a revolutionary product comes along that changes everything" (Jobs cited in Price 2017: para. 7; Quinn 2017: para. 4). With the advent of the smartphone, a revolutionary human tool arrived. Since then, the global discourse seems to advocate overwhelmingly for the benefits of owning such a device. However, as Sophocles said, "nothing vast enters the life of mortals without a curse" (cited in Shlain 2006:1; Crust 2020: para 4). Smartphones ushered in the capacity for continual connectivity to a multitude of social media and information platforms. Subsequently, the iPhone set new standards of efficiency, making smartphones more facile and effective to use. This technology has consequently impacted the psychological (Theodisiou 2018), psycho-social and academic development of adolescents significantly (Steyer 2016). Considering the influence of smartphones on the adolescent's lifestyle, it seems imperative that research should investigate the extent of these effects. Adolescence refers to the transitional phase of growth and development between childhood and adulthood which is defined by the World Health Organisation as any person between 10 and 19 (Csikszentmihalyi 2018). The aim of this study was to explore smartphone use among adolescents in a private international school in Myanmar. Recommendations were made from an analysis and interpretation of the resultant data collected.

This research project evolved after my interest was piqued about student phone dependence when it became a topic of discussion and concern in several parent-teacher conferences at a private high school where I was a teacher, in Istanbul, Turkey. Dependence refers to the state of relying on or being controlled by something or someone else (Foddy & Savulescu 2014). My colleagues at the same school complained about their students' compulsion to reach for their devices and check social media in every lesson. Some of the students went as far as lying about their computers' lack of function or battery life in order for them to have to use their smartphones instead. Furthermore, when students were given on-line tasks in class, we observed that most of them had several sites open on their laptops at the same time and many had accessed the on-line WhatsApp messaging application. This meant that teachers had to police the students to ensure that

they stayed on task or had to rotate the class so that their screens could be viewed from behind.

Since I was preparing for an imminent move to Malawi, it became a subject of great interest to me as to whether Malawian adolescents were afflicted with the same trends in smartphone and digital media dependence as their counterparts in Turkey and developed countries. On arrival at the international school in Malawi, I was amazed to discover that pastoral staff and counsellors were worried about the level of smartphone usage. They bemoaned the lack of self-regulation skills and the extent of cyberbullying that was operative amongst the students. The school held a workshop titled "Parenting in the Age of Social Media" (September 2018) to try and address the challenges which they had identified. This lent further credence to the value and appropriateness of my research aims.

My subsequent move to Myanmar meant that most of the research including the data collection carried out in the city of Yangon where I was living and working. This is also a country which had shown an exponential increase in adolescent smartphone ownership. Here too adolescents' dependence on these devices seemed just as much a cause for concern as was demonstrated in Turkey and Malawi. These formal and informal discussions made me aware of the potential dependence on or addiction of adolescent students to smartphones and connectivity. This in turn motivated me to pursue research findings on the topic and raise questions about what could be done to address the problem, if any.

The tendency to constantly check smartphones for social media updates and messages, is widespread. This is borne out by Stone (2009: para. 3): "We pay continuous partial attention in an effort NOT TO MISS ANYTHING" she said, referring to technology preoccupation. Bay (2017) concurred as did Weigel and Heikkinen (2007). "They typically divide their attention between various programs, windows, and activities, such as completing a homework assignment, managing their online social identities and networks, participating in some type of interactive online game, listening to music, and communicating with their friends via instant messaging or some other voice over internet protocol application" (Elofson 2012:14). Weigel and Heikkinen found that media

multitasking became more than 'just a habit' for adolescents to being an increasingly 'strong preference'.

In order to better understand the impact of smartphones on adolescents in Myanmar, I needed to contextualize this study in global terms. From the literature review, Ted Talks (Newport 2016), on-line interviews (Sinek 2017), current media articles (Steyer 2016) and informal discussions with counsellors, students, teachers and parents, it was easy to note a marked level of concern expressed about adolescent digital media use. All aforementioned role players were worried about how the amount of time spent on devices impacted adolescents' daily lives.

Parental groups, educators and digital media critics such as Steyer et al (2016) appear to have shown the greatest interest in challenging the status quo (Penn, Schoen & Berland 2003). Understandably, commercial enterprises overwhelmingly portrayed the benefits of smartphones as liberating people so that they are not limited "by traditional geographical and locational" confines (Selyer & Mugova 2017:1). Researchers had also focussed more on mobile connectivity as "an engine of development" (de Bruijn, Brinkman & Nyamnjoh 2013:127) and studied trends in digital media use and its effects, than presenting a clear course of management.

1.2 Rationale for the Study

Many of the students in Istanbul admitted to sleeping with their phones on, having interrupted sleep, checking messages during the night and surfing the web or engaging in on-line activities instead of having a good night's rest. This behaviour is apparently typical of adolescents in developed countries (Hale & Guan 2014; Cain & Gradisar 2010). Consequently teachers find that students do not perform optimally academically and are distracted by their smartphones and internet access, rather than being focused and participating in the class (Woods & Scott 2015).

From my preliminary observations and review of current literature, it became apparent that concern about the media use by adolescents was growing, both in developed and developing countries. Parents expressed a sense of loss of control and powerlessness in managing adolescent media use (Underwood & Ehrenreich 2017). Adolescents were not sufficiently regulating their on-line time or subject matter. "Self-regulation has failed and legislation needs to be introduced", Theodisiou (2018) told the Telegraph after it had

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launched the Duty of Care Campaign. Parents experienced problems in their social interactions with their children and according to Knorr (2018: para. 1), "with kids' digital well-being a concern, researchers were already exploring potential links between social media and the rise in teen suicide rates, tech addiction, and loss of real-life social skills".

As introduced above, Knorr (2018) suggested that an antidote to these concerns would be engaging in activities like reading, practicing a hobby or volunteering to help others, in order to reduce screen time by varying activities. Education should provide a scaffolding function to reinforce and support parents' efforts at home. Since students spend so many hours at school, curricula should incorporate lessons on how to use social media in a healthy way and educational institutions should provide alternative strategies and activities to emancipate students from the grip of their social media habits.

Twenge, Martin and Campbell's (2018) study used a large annual survey studying 8th, 10th and 12th graders nationally in the United States, conducted by the University of Michigan. Twenge et al. called, "the relationship of screen and non-screen activities a 'zero sum'. By this she meant that "if you are doing one, it takes time away from the others" (Twenge cited in Encompass Counselling 2018: para. 5). This is in the same vein as what Newport (2016) essentially posits in his TEDxTysons Talk, that the most effective way "to get more meaningful work done, is by working in a state of high concentration on a single task, without distractions". Scott (2015:1) states "A study showed that students who do not use social media sites end up with a higher grade point average and higher test scores than a social media user". This could cause some concern to educators. UK Culture Secretary, Matt Hancock, was quoted in the Guardian on the 20th June (2018) as saying that he "condemns unsupervised access to smartphones and urges more head teachers to ban mobile phones in schools". More evidence for a call to action, is that many students display a relative lack of real connection with others and would rather text than speak to someone in a phone call, as text is viewed to be less intrusive (Stone 2009). Because of this, the need for real connection with mentors and the environment seems to be a pressing issue. Students are often found sitting in groups texting, rather than looking at each other and talking to one another. As parents and schools are feeling more compelled to stop the smartphone addiction of adolescents, some governments have taken action.

These global ramifications of digital media addiction have been that Germany, South Korea, France and the Philippines have all promulgated laws to "tame and civilise digital capitalism" as reported in the Guardian (Morozov 2017). Smartphone ownership and Internet usage continues to increase in emerging economies (Poushter 2016). Thus developing countries which do not yet demonstrate the same magnitude of smartphone ills, can be expected to follow the global trend soon. Perhaps this is an appropriate time to pre-empt the Global North's maladies. This research sought to make recommendations based on its findings, on how smartphone use by adolescents could be managed more efficiently. There clearly is a gap between the alarms raised in developed countries and effective large scale strategies to address these concerns. There is also a significant opportunity for developing countries to avoid the internet and smartphone afflictions which beset technologically advanced nations. It is at this vagancy which this study was aimed.

1.3 Statement of the Problem

There is a growing concern worldwide about the dependence of adolescents on smartphones. This is definitely affecting student academic and social development, among others. The area of adolescents' smartphone dependence is scantly researched in schools around the world including in Myanmar and this calls for intensive investigation into the associated growing concerns. This case study therefore sought to contribute to research into this area by exploring the smartphone dependence of adolescents in a private international school in Myanmar. Various factors which interacted with each other, such as work pressure, the stay-at-home restrictions of the COVID-19 pandemic, feelings about smartphone use and the culture in this society were acknowledged. The case was observed in the real setting of Yangon..

1.3.1 Aim of the Study

The aim of the study was to explore smartphone use among adolescents in a private international school in Myanmar.

The following research questions guided the study.

1.3.2 Research Questions

1. What is the level of use of smartphones by adolescents at a private school in Myanmar?
2. To what extent is the level of smartphone use among the adolescents considered problematic by the school stakeholders (students, parents, teachers and administrative staff)?
3. What are the implications and consequences of smartphone use by the adolescents in the school?
4. What recommendations can be made about the smartphone use of adolescents in the school?

1.4. Literature Review as a Means of Generating Context and Aiding Analysis

It was imperative for me to conduct the literature research first, before embarking on the fieldwork, in order to have contextual knowledge to identify the most relevant data collection methods and to focus my interview questions (Stauss & Corbin 1990). An additional benefit was identifying disputed points about my topic (McMillan & Schumacher 2001) and uncovering areas where research was lacking (Webster & Watson 2002). Trends which supported my research problem, emerged (McMillan & Schumacher 2001).

There was little evidence-based research available addressing smartphone dependence in adolescents in Myanmar. Rather, the focus was on smartphone use for propaganda dissemination (Fernandez ed. 2018) and economic activities. It seemed expedient to call for well-respected academics to examine the topic further. This would shed more light on the associated phenomena and generate some important suggestions for application in practice.

It is necessary to mention that although some opponents of large scale technology use have been somewhat alarmist (Leonhard 2016; Newport 2016; Sinek 2017; Zuboff 2019), this study is not against smartphones or technology use, but is interested in the most beneficial management thereof for the adolescent user. Further to this, I aimed to include adolescents in this discussion, in an attempt to mitigate against generating bias and misinformation.

Several major elements of concern arose from my literature search. They were the following. There is a lack of awareness amongst adolescents about data brokering and overt and subtle internet threats (O'Neil 2016). Adolescents are not sufficiently educated about media manipulation, fake news and internet algorithm used to exploit them (O'Neil 2016). There is an increasing expectation of instant gratification and fear of being bored among adolescents (Sinek 2017). Adolescent sleep patterns are disrupted due to cheaper late-night calls and cheaper night data (Thomée, Harenstam & Hagberg 2011).

They are psychologically stimulated based on media content and the light emitted from devices affects their circadian rhythm (Le Bourgeois, Hale, Chang, Akacem, Montgomery-Downs & Buxton 2017). Adolescents report feelings of inadequacy and depression related to sites such as Instagram and Snapchat (Cramer 2017). Cyberbullying on Facebook and other social media sites has taken on problematic proportions and is difficult to control (Wakefield 2018). Adolescents are vulnerable to sexual exploitation (UNESCO 2012). Sexting amongst underage adolescents has become an issue (Chalfen 2009; Lippman & Campbell 2014). Classrooms are disrupted albeit through texts, Snapchat, Instagram or calls. The almost unbroken connectivity of young people to social network sites, creates a habitual expectation of connectivity (Dilts 2018). Widespread age inappropriate (pornographic or violent) material is available on social media. Parents are expressing feelings of lack of control about adolescent smartphone use. The poor are further impoverished by pressure to buy devices and expensive airtime or data (de Bruijn, Brinkman & Nyamnjoh 2013). Additionally, adolescents are expressing feelings of disconnection and loneliness due to excessive cyberspace connection (Amatenstein 2018).

In a longitudinal study on heavy users of computers, social media, and mobile phones (Thomée, Härenstam & Hagberg 2011), showed greater levels of prolonged stress, depression, and sleep disturbances. Further troubling details which came to light, were that screen time and internet usage were found to affect sleep negatively (Brunborg, Mentzoni, Molde, Myrseth, Skouverøe, Bjorvatn & Pallesen 2011), and SNS (social networking site) addicts were reported to show poorer sleep quality than non-SNS addicts did (Wolniczak, Cáceres-DelAguila, Palma-Ardiles, Arroyo, Solís-Visscher, Paredes-Yauri, Mego-Aquije, & Bernabe-Ortiz 2013). According to a publication in the Sleep Medicine Journal (Hale & Guan 2014), delayed bedtime and shorter total sleep time among adolescents was found to be most consistently related to media use. In a later

study (2015), Glasgow University cited that teenagers were checking social media updates in the middle of the night, disrupting their sleep (Wakefield 2018). It found many teenagers so invested in social media and so worried about missing out on posts, that they logged on in the middle of the night in order to get updates, leading to sleep deprivation.

In a report by the OECD (2015:4), of students interviewed "the majority said that the internet was a great resource for obtaining information and more than half said they felt bad if no internet connection was available. Students who spent more than six hours online on weekdays outside of school hours were more likely to report that they were not satisfied with their life or that they felt lonely at school". According to Theodisiou (2018: para. 6), "Social media is having a negative impact on mental health." She also said it was considered a leading cause of childhood depression. "I do think it is a big problem and that we need some rules".

Wang (2011: para. 5) reported that "from their survey data, the investigative team reached the chilling conclusion that problematic internet use, perhaps through intermediary phenotypes like self-control and impulsivity, is associated with aggression, depression, and substance abuse". A study led by the Royal Society for Public Health (RSPH 2017) asked whether social media was causing childhood depression. In this study one thousand five hundred young people aged 11-25 were asked to track their moods while using the five most popular social media sites. The findings showed that Snapchat and Instagram were the most likely to inspire feelings of inadequacy and anxiety, making them feel worse about body image. Two-thirds said Facebook made cyber-bullying worse. Cyber-bullying is defined by Moreno (2014 para. 2) as: "an aggressive, intentional act or behaviour that is carried out by a group or an individual, using electronic forms of contact, repeatedly and over time against a victim who cannot easily defend him or herself". It is not surprising that psychologists such as Theodisiou have suggested limiting the use of devices or on-line time in order to address issues such as depression and warped body image.

 The "always stay entertained" habit of mind is one of the most problematic for parents, educators, and journalists. " Kids today seem to be always consuming media — watching TV, listening to music, talking on the phone, surfing the net, instant messaging, and all at once. With limitless access to NDM (Network Data Mover) and to each other, there is always something to consume or someone to engage with" (Weigel & Heikkinen (2007:43).

A fairly trendy acronym was coined in 2004 by Patrick Mc Ginnis in the Harbus, to explain this constant need for digital connectivity. It is called FOMO - the fear of missing out (Kozodov 2017). The Millennial problem of being used to "instant gratification" and suffering from "systemic impatience" (Sinek 2017) is part of being constantly connected to endless resources. Dimock (2018) defines "Millennials" as a name given to individuals born between 1981 and 1996 (ages 22 to 37 in 2018) and "Postmillennials" those individuals born from 1997 onwards. They have also been named Gen Y and Gen Z or iGen respectively, but for the purposes of this discussion, we will continue to refer to them as Millennials and Postmillennials.

In conversation with Summer Rayne Oakes (2013) and Tom Bilyeu (2017), Sinek highlighted that Millennials and Postmillennials are "All addicted to dopamine". Dopamine is a neurotransmitter which has been associated with the sensations of reward or pleasure (Berridge, Robinson & Wayne 2010). Addiction is the repeated involvement with a substance or activity despite the substantial harm it causes, because the involvement was (and may continue to be) pleasurable and/or valuable (Horvath, Misra & Morgan Cooper 2018). Sinek alluded to adolescent social isolation, disconnection and feeling a lack of value and importance because of the intrusion of mobile phones, which seems antithetical since the motivation for going online is precisely to connect socially and receive affirmation from peers.

Newport (TEDxTysons 2016) stated that social media keeps us in a "state of fragmented attention" which results in a "permanent reduction in the capacity for concentration". He refered to Lanier's explanation that "these companies offer you shiny treats in exchange for minutes of your attention and bites of your personal data, which can then be packaged up and sold" to explain how personal information is harvested unwittingly. The problem with the adolescent drive for instant gratification and dopamine addiction, is that they are blissfully unaware of and unconcerned about the extent to which their personal data is harvested and used. Newport stated that "major social media companies hire individuals called attention engineers, who borrow principles from Las Vegas casino gambling, among other places, to try to make these products as addictive as possible" (TEDxTysons 2016).

At the other end of the risk spectrum, "children may be bullied, harassed or stalked (child 'luring') and/or coerced, tricked or persuaded into meeting strangers off-line, being 'groomed' for involvement in sexual activities and/or providing personal information" (UNICEF 2012:22-29). There is evidence for concern according to Rębısz and Sikora (2016:194), "Research on Internet addiction, initiated by Kimberly Young at the end of the twentieth century, usually appears in the literature in the context of young people, who have been found to be most vulnerable. The phenomenon is known as Adolescent Internet Addiction". The symptoms of this addiction are a number of the following "anger, depression, loneliness or anxiety associated with the lack of access to the network, the weakening of social ties, withdrawal from real life, lack of educational achievement, chronic fatigue or deteriorating health".

Although the Polish study did not reveal high numbers of addiction (11%), Rębısz and Sikora made a statement which supported my belief about the role of schools in this problem, "As school and home are the two main areas of a young person's life, these two environments in particular should be ones in which pathological internet usage by adolescent users is tackled" (2016:202). This was further reinforced in a South Korean study which stated; "adolescence is the onset period for many addictive behaviours and so more proactive attention needs to be given to reducing these early negative behaviours" (Yu, Kim & Hay 2013:2682). Based on these results, interventions designed to enhance adolescents' emotion regulatory abilities have the likelihood of mitigating problematic and even addictive internet use among the youth.

To date the response from social media companies has been tokenistic and inadequate. They seem to have failed to grasp the true scale of the problem. Manufacturers have also negated problems or declined to comment on some of the issues raised. Chalk (2017) said of social media companies: "It's time they become far more transparent, robust and accountable. Cyber-bullying can devastate young lives". There has been a call from parent groups for manufacturers of applications and hand held devices to build in stricter age limit controls, to not advertise to the younger market and to build in pop-ups to indicate the length of time children have spent on-line. As a result, Cramer (2017) asked for three specific changes:

- a pop-up notification when a young person has spent a certain amount of time online

- a watermark on photos that have been digitally manipulated

- school lessons on how to use social media in a healthy way.

In addition, a group of US child welfare experts recently wrote to Facebook founder Mark Zuckerberg urging him to close down Messenger Kids, a messaging app developed for children, saying it was irresponsible to encourage pre-teens to use the platform (Wakefield 2018).

Similar to Cramer, they also asked for:

- solutions on how to prevent under-age users from accessing their platforms;

- a definition of what constituted cyber-bullying and how to address it;

- whether it was feasible to create pop-up warnings for youngsters who spend a long time online.

Facebook however claims that Messenger Kids provides a safe alternative for children and that it is "responding to a need". In a report by Dilts (2018) two investment groups that hold huge Apple stock between them, have called for digital locks to better control youngsters' use of technology. They are concerned that if Apple does not address growing concerns about smartphone use, its market value and reputation could be damaged. Apparently half of US teenagers believe they are addicted to their mobile phones. According to the investors, makers of such "powerful products" also needed to help parents ensure proper use of phones. They called on Apple to improve its parental control systems from a "binary" (all or nothing approach) to a more user friendly one.

Another indicator of how difficult connectivity management can be for parents, is when some parents have admitted to sleeping with the home Wi-Fi router in their bedroom in order to make sure the children cannot connect to the Wi-Fi in the middle of the night (Weigel & Heikkinen 2007).

From the literature cited above, it seems that adolescents in many different cultural settings globally are experiencing difficulty self-regulating their internet connectivity. Adolescents need the skills to socialise effectively in the physical world. Alarms have been raised about the unforeseen negative effects of hyper-connectivity for the future, as "digital obesity is rapidly developing into a pandemic of unprecedented proportions" (Leonhard 2016). By this Leonhard is referring to a digital "feeding frenzy" which is occurring during this age. Leonhard also views technology as slowly eroding our humanity and stealing our privacy and anonymity. Accompanying those, are a loss of spontaneity and

feelings of elation. He sees technology as inhibitive of imagination and spirituality. These are the effects of our burning desire to keep up with technological trends. He is concerned that we will "use screens as overlays of our actual reality", this being our attempt to modify our circumstances with digital media, and so creating an artificial life. When will we no longer be able to distinguish reality from digital fantasy? These statements are specifically pertinent considering the "fake news" and false information that adolescents are constantly exposed to. From adolescents' apparent immersion into digital life, a call for strategies to balance their lifestyle has become appropriate.

Some preventative strategies have been suggested for the adolescent population in a bid to divert them from constant Smartphone dependence. These are more hands-on activities such as helping at Senior Citizens' Homes, visiting the terminally ill, making food packages for the homeless, donating unused items to charities, making crafts with and reading to children in children's homes, collecting litter, recycling, making bird boxes for birds and bird-watching, grooming horses, helping at animal shelters, growing fruit and vegetables in a pot garden, helping neighbours, and/or going camping or hiking, to mention a few. Common Sense Media (2017) posted the following advice, "Continue to send the message to kids that what's important is character, kindness, effort, and empathy – not stuff", which is what connectivity exposes them to.

Further to this, in the "A Better Me" programme (2017) Hampshire Fire and Rescue personnel demonstrated how it seeks to engage "problem" adolescents in the activities of the fire department in order to teach practical skills; to gain mastery; improve physical fitness and increase social skills and self-esteem (RSPH Movie 2018). Adolescents are involved in "hose runs and ladder climbs" and this helps reduce stress, with a change of environment completely divorced from the adolescent's everyday life, giving them a sense achievement, a new venture that they are a part of, and novel events to talk about. Sport was highlighted in a speech by Lemke (2008) as having benefits for the youth which are not technology based and digital media dependent. They were listed as team-building skills; communication skills; decision making skills; problem solving skills; life skills; sense of community; self-esteem; personal responsibility; empathy; socio-moral development; resiliency; and improved educational achievement.

Another study, focussing on myopic children (who spend too much time indoors in front of screens), found that the best remedy for eye health is to get children playing outside as much as possible. "Protective of myopia development is time outdoors - sport and leisure outdoors are protective of eyesight," (Sellgren 2018: para. 19). Pickhardt (2012 para.13) has three main suggestions, "take the child outside to take back the active pleasures of the outdoor life and connecting with the wonders of the natural world. Second, spend daily time with self and with family with all electronic devices and screens turned off. And third, invest lifetime in meaningful offline, non-spectator, and resourcefulness-building activities like helping, volunteering, playing a sport, exercising, creative expression, inventing, problem-solving, learning something new, or working on a hobby or project or for a good social cause".

Since we are social beings, what can replace real world relationships and maintaining these with other people? My expectation was that adolescents would benefit from being re-trained in other skills and competencies and that they would gain a sense of mastery and value from these new-found skills. I also cautiously predicted that they would feel more connected in reality and face to face relationships. Currently there seem to be no focussed strategies or publications in education which suggest a way of introducing this balance in adolescents' lives.

1.5. Research Methodology and Design

1.5.1 Research Paradigm

A research paradigm comprises four elements namely, epistemology, ontology, methodology and axiology (Lincoln & Guba 1985). Epistemology refers to how we know something; ontology refers to the relationships between things and knowing them, whether a realist or relativist view; methodology is about how we will discover knowledge and axiology refers to what is valuable to the study.

This study fell within the research paradigm of constructivism (McLeod 2018), within a social constructivist (Vygotsky 1978) theoretical framework. Both of these paradigms refer to the construction of meaning and knowledge through personal experiences. The latter (social constructivism) focusses more on the collaborative nature of learning within a specific cultural or community context. The reason for the use of these paradigms was that the data could be extracted from the subjective feedback and experience of the sample

group. Also, the data was constructed from the interactions of the individuals in the sample group. Since the focus of education has shifted primarily to collaborative and group work, this further underscored the use of these paradigms.

1.5.2 Research Approach

The epistemological approach used in this study was an emic approach (Killam 2015), interacting with the selected sample group in order to find out what their experience of the "truth" is. This can also be described as an insider's point of view. The ontological approach was relativist. The relativist approach does not adhere to a single truth, and since the experience and perception of the sample group were studied, this was the most appropriate approach. In terms of methodology and axiology, this study took a qualitative approach from within the social group. Viewing responses from the perspective of the subjects made it relatively easy for the researcher to discover value in the data and the challenge was therefore to remain neutral toward the findings (Lyon 2017).

1.5.3 Research Design

Research design is a logical structure of the inquiry for data collection. The design requires careful sampling and equally careful collection techniques and if done well, a "surprisingly small number of interviews, narratives or focus groups can yield the data to answer your research question" (Elmusharaf 2012) which the qualitative approach allows for. It is a theoretical attempt to make sense of observations and findings. The single case study was adopted to collect data (Nock, Michel & Photos 2007).

The single case study was used to research the students' habits and experience regarding their smartphone use and their related contextual conditions because it is a flexible and efficient set of procedures (Nock et al. 2007). A Single Case Study allowed for more time and resources to be expended on a single group (Yin 2003). Individuals in a case study are elements whose behaviour is studied, and these features are the characteristics of the case (Borgatti 1999). According to Gerring (2004) the aim is to extend the findings of an intensive study of a single unit across a larger set of units. Some of the features which were recorded in my case study, were gender, age, factors motivating smartphone use and feelings of distraction or dependence. I used several methods of study (Thomas 2011)

in order to understand the setting of the case, but did not seek to analyse it. The setting and boundaries of the case were that it was set at a specific high school in Yangon, Myanmar.

Inductive analysis was used to generate concepts from the findings collected from qualitative interviews. Deductive analysis was also used since it extracted meaning from specific observations and conclusions were thus drawn from the data gathered. The aim was to uncover why commonalities in the findings existed, by testing the proposed theory through an analysis of the response data and individual observations.

After the obtaining the prerequisite consent, the staff participants were interviewed. This was done concomitant with student observations. Preliminary data analysis was conducted on the data obtained thus far so as to inform the focus group discussions with the students, which was done two weeks later, following focus group discussion with the students.

1.5.4 Population and Sampling

A population study is the scientific study of a group of individuals or a complete set of elements that share some common characteristics defined by the sampling criteria established by the researcher and taken from the general population (Encyclopedia.com 2018). A sample however, is a part of a population and consists of a group of subjects from the whole (Flom 2018). The sample was used in this study. The population from which the sample was drawn, was the high school student body, which had a total number of 350 students. The school has both a middle and elementary section, housed in different locations, but in relatively close proximity to each other. All high school participants attended school in the same pair of buildings. The participants were all proficient in English and living in Yangon. They also each owned at least one smartphone and had uninterrupted access to the internet. The culture of the school is compliant with Bhuddist values and all students are required to adhere to these parameters. No distinction was made between the high school students in terms of specific grade level or stream of study. The same broad criteria were used with the staff participants, in that all academic staff at the high school were approached, regardless of subject or grade level taught, or whether their specific function at the school was not purely educational. This therefore included the

counsellor, principal and course selection supervisor, all who have extensive dealings with the students.

Purposive, convenience, snowball and opportunistic sampling strategies were employed to select samples of students, parents and teachers. Convenience sampling is the sampling employed to obtain a group of individuals from the population selected, but chosen because they are close at hand rather than being randomly selected. This suited my study because all the participants were affiliated with the school and geographically easily accessible (Glaser & Strauss 1967).

In Purposive or Judgemental Sampling the researcher obtains a sample that meets certain criteria and is not representative of a population (Elmusharaf 2012). Purposive Sampling is a non-probability method that selects a sample based on characteristics of a population and the objective of the study. Purposive Sampling was suitable for this study, since a homogenous group could be identified.

The following criteria were used to draw a purposive sample:

- The criteria for the choice of parents were that the parents would be resident in Yangon Myanmar; have children at the target school who are aged between 13 and 18 years; both children and parents owning a Smartphone and who have the means and capacity to be continually connected to the Internet.

- The criteria for the choice of students were that they would be resident in Yangon Myanmar; be proficient English speakers; attend the target school; are aged between 13 and 18 years; own their own Smartphone and who have the means and capacity to be continually connected to the Internet.

- The criteria for the choice of staff were that they would be resident in Yangon Myanmar; work at the target school with students who are aged between 13 and 18 years; own a Smartphone and who have the means and capacity to be continually connected to the Internet.

The sample consisted of five participants each from the staff and parent groups, and ten student participants, which brought the total number to twenty participants. These criteria were carefully evaluated and refined after selection, so as to define cases that would provide detail rich data relevant to the specific research problem, whilst avoiding specific bias.

1.5.5 Instruments and Data Collection Techniques

The main data collection instruments used in this study were the semi-structured interview, focus groups, questionnaires and observations. The most useful interview format for conducting qualitative research is often "semi-structured" according to Zorn (2008). Semi-structured interviews, as the name indicates, are not highly structured but not unstructured. They contain open-ended questions. Semi-structured interviews are carefully designed to elicit the interviewee's ideas and opinions on the topic of interest, but not with leading questions which will elicit specific (preconceived) answers. I took care not to influence the interviewee into answering in a certain way, nor to bring any kind of pressure to bear on the interviewee.

Observations were used to supplement the data from interviews, focus group discussions and questionnaires. The information from the semi-structured interviews was used as a framework to identify data to be collected in the classroom observations. Observation is a systematic approach to data collection in which researchers use all their faculties (senses) to examine people within a specific research field and record the observations. This type of observation involves prolonged engagement in the setting. It is sometimes referred to as an unobtrusive method. Some elements of good observation technique according to Silverman (2006), are prolonged engagement, clearly expressed notations of how observing is done, methodical improvisation and adjustment to develop a complete understanding of the setting, focusing attention in some 'standardised' way, using a checklist to guide the observations, recording observations in great detail, taking the subject's perspective and contextualisation. The observation techniques are sensible procedures that could be reproduced. Participant observation involves the observer being a member of the group (Cohen, Manion & Morrison 2000). Observer bias should be avoided. Observer bias is the tendency to see what we expect or want to see (Fracher 1985). The method of classroom observation has strengths and weakness. The strengths are, gaining good insight into the behaviour and interaction of the observed, seeing things that are often taken for granted by researchers exploring perceptions. The limitations are that the act of observation may affect the behaviour of those involved. Also the thinking behind the acts cannot be observed.

Focus groups "consists of a group of individuals who are asked questions about their opinions and attitudes towards certain products, services, or concepts" (CFI Education Inc.2019). Focus group discussions were included as a data collection tool, since they captures real-life data in a social setting and the interaction of group members can generate rich data. They are flexible and reveal information about the research subject that may not have been anticipated. Group dynamics also have the potential to reveal additional information which may not have emerged from individual interviews. The results they generate are quick and the cost of conducting them is low (Cole 2019). Further, new knowledge acquired during the questioning can inform moderators to modify their questions in order to gather the most valid data (Hoets 2018). Dual-moderator focus groups are collaborative and have two moderators, each with a different role. When one moderator is asking questions, the other ensures that answers are forthcoming and assists with the smooth running of the group. This can enhance productivity and enabled the comparison of findings directly after the conclusion of the groups (Agadoni 2017). For small focus groups, two moderators would be excessive and could complicate the group dynamic (Morgan 1997).

The number of participants for the focus groups consisted of ten participants. These were kept homogenous (i.e. only students) so that the individuals in the group felt most comfortable to share openly (Prasad & Garcia 2017). A dual-moderator focus group was initially considered, but because of the small number of student participants (ten students), the need to keep the data secure and the level of trust between the participants and the moderator, this was discarded in favour of a single-moderator focus group. All students were cautioned about disclosing the contents of the interviews with outsiders to the group. Due to the social restrictions of the COVID-19 pandemic, the final focus group was a virtual synchronous focus group discussion, using the Zoom application.

Semi-structured questionnaires were administered to parents. The intention was to provide richer feedback, since respondents could add new questions or comments to their answers. Potentially the questionnaires would give insight into explanations for what was happening and insight into participants' perceptions, opinions, feelings and attitudes. This type of questionnaire allowed for details to emerge that were possibly unforeseen by the evaluator and they were less time consuming. The scaffolding information from the semi-structured interviews and focus group discussions was used to further inform the questions and provide a framework for identifying the most relevant data. The questionnaires were

electronic (Cohen et al. 2000). Questionnaires were pilot tested on a sample of participants, to ensure that they were understandable and interpreted in the expected manner. They were also expected to yield useful data. Therefore the questionnaires were simple enough and not too long, consisting of twelve questions only.

1.5.6 Research Site

The research site is a private school in Yangon, Myanmar. The school is an English-medium, co-educational international preK-12 school. It was founded in 1998 by a group of educators and business leaders. It serves both Myanmar and expatriate students living in Yangon. The school follows a college preparatory programme and high school students study a curriculum modelled on a U.S. high school programme that leads to a U.S. high school diploma. Advanced Placement courses are also offered. The student population can be broken into the following categories and numbers at Secondary level:

Australian 1; Bangladeshi 1; Canadian 1; Chinese 3; Italian 1; Korean 22; Myanmarese 312; Portuguese 1; Thai 2; South African 1; North American 5; most of which are local students 89% with Koreans coming a distant second at 6%.

The administrative structure of the school consists of a Director; a Head of Secondary and Head of Primary. The parent body is composed mainly of Myanmarese and a few Expatriates of various designations. The reasons why I selected this school is because of the availability of a homogenous sample group and also the ease of access. The homogeneity referred to, is in the fact that all students were High School students, all were resident in Yangon and all attended the target school. Furthermore, this venue saved costs in terms of time and not having to travel to other venues, since students, teachers and parents habitually came to the school, largely on a daily basis.

1.5.7 Research Procedure

Interviews, observations and focus group discussions were conducted on the school premises in specifically allocated venues. After receiving signed consent forms informing participants of their right to participate or withdraw from participating in the study at any time (Bhattacherjee 2012), staff were the first group to be interviewed. My focus was on observing specific time limits for each type of data collection. The inceptive interviews were restricted to 30 minutes, which was reassuring for participants in terms of planning their time to accommodate the appointments. Having made a brief review of the data collected

from the staff interviews, student observations were refined and continued for an additional two weeks. These were followed a month later by a focus group discussion with the students. These sessions were likewise time limited and restricted to an hour. The focus groups proved very valuable in terms of introducing new questions and providing insights into how to rephrase existent ones more effectively. The clarity of the questions produced unambiguous answers which reduced the amount of time spent on categorising ambivalent responses. Preliminary data analysis was conducted on the data obtained thus far so as to inform the questionnaires with the parents and guide the type and number of items. These questionnaires were administered during the last two weeks of June 2020. Specific, targeted questions were used and specific templates were made for classroom observations. The template is attached in Appendix G. By keeping to the prepared, structured parameters, time constrains did not become an overwhelming issue.

1.5.8 Data Analysis and Interpretation

Qualitative content analysis was used to assign codes directly to text data in conventional content analysis. With a directed approach, analysis was guided by a theory or relevant research findings which assigned initial codes to data. A summative content analysis involved counting and comparisons, usually of keywords or content, followed by the interpretation of the underlying context (Krippendorff 1969). Questionnaires provided additional data from the sample group to expand the value of contextualization. Furthermore, data from the interviews with teachers and focus group discussions corroborated these findings. Empirical data about age, gender, economic status, length of residence in the country, religious influence and academic performance were collected and documented to discover trends and themes associated with each element and how they were related to the problem.

1.6 Credibility Trustworthiness

Credibility refers to "the appropriateness of the inferences made about the results of an assessment" (de Bruin 2010:51). Establishing credibility was necessary because of the subjective and contextual nature of the data. It is a measure of the trustworthiness and believability of the research and whether the research conclusions support the findings and measure what it purports to measure. If focus groups and interviews were used, were the discussions and conclusions evidence based? (Marsden 2013).

Trustworthiness refers to establishing reliability – how accurate the findings are; transferability – how applicable the findings are to similar samples and situations; confirmability – how neutral the research analysis and interpretations are in representing the participants' responses and dependability – whether the study could be repeated by other researchers with the given information to yield consistently similar results (Shenton 2004). Trustworthiness also speaks to the accuracy of the measuring instrument or procedure (Marsden 2013).

Daytner (2006:2) suggests safeguarding trustworthiness through "triangulation, establishing a data trail, acknowledging researcher subjectivity, member checks and participant review, prolonged engagement, and consideration of disconfirming evidence and contradictory interpretations". The trustworthiness of my study was safeguarded by acknowledging personal biases and potentially biased sampling. Rich, detailed data of participants' accounts was included rather than a large volume. Meticulous accuracy was maintained in recording and reflecting information. Information was cross-checked from several perspectives. Focused clarity of thought was demonstrated in analysing data. Testing and re-testing was done at different times and with two parallel forms or questions to establish consistency (Noble 2015). Data collection instruments were made as clear and unambiguous as possible.

The help of independent third parties not associated to the research, was engaged in viewing and listening to data collected during interviews and focus groups. This ensured that the analysis of data was less subjective and less likely to be skewed because of a single perspective on the information. A more comprehensive picture would have appeared from the data if participants had been followed over a longer period (12 months). Since educators and parents would have a vested interest in the findings, they were asked to check interview data for accuracy and insights and suggestions were welcomed. The aim was also to interview participants from many different backgrounds, in order to make the findings as widely applicable as possible.

Although peer or parent pressure could have had an influence on participation in interviews, this was taken into consideration. In the light of social-responsibility projects at the target school, and in the interest of a more informed and improved educational system,

interviewees were motivated to assist in finding answers and solutions. I expected to find trends and meaningful parallels between participants' answers. Given that the overarching aim of the study was to improve the quality of life for all role players, I expected eagerness from participants. Attention was given to interviewing participants who were of a relatively stable equilibrium and not hungry, agitated, distressed or very tired, where possible.

1.7 Research Ethics

Most importantly, the research obtained ethical clearance from UNISA and adhered to the ethical standards set by UNISA. A description of research ethics is that it has to do with more than just informed consent and participants' privacy. Protection of participants' rights to refuse or withdraw is also essential.

In the light of the above, particular care was taken when recruiting participants from vulnerable groups, such as children, the elderly, or people with special needs, illnesses, addiction, etc. Participants were informed of the purpose of the study, and their right to withdraw at any time. It was preferable to provide an information sheet describing the purpose of the study, what would be required of participants and what would happen to their data (information) and the results of the study, including storage of data. Written informed consent was considered a superior form of consent to verbal consent.

Participants' privacy and confidentiality was respected in data gathering, management and reporting. All the parameters of the research and the voluntary nature of participation was discussed with and explained to participants prior to them committing themselves to the interviews. Confidentiality and non-disclosure of personal information was also assured and maintained at all times and permission was obtained from parents and supervisors wherever necessary, in writing. Voluntary, informed consent was explained to all parties involved and transparency of the process was maintained throughout. Any individual's desire or need to withdraw from the interview process was honoured without reservation or recriminations, in order to ensure a completely voluntary process. Permission to access premises and venues wherein interviews would be conducted was obtained, also in writing. At all times, individuals being interviewed were treated without prejudice and with respect. I endeavoured to conduct interviews with integrity and to respect the participants' dignity, aiming at all times to cause the participants no harm (Blanford 2013).

1.8. An Overview of the Layout of the Dissertation

1.8.1 Introduction and Background to the Study
This chapter serves as an introduction and outline of the thesis.

1.8.2 Literature Review
This chapter describes the theoretical framework of the study and reviews the literature and research findings on the topic of smartphone dependence.

1.8.3 Research Design and Data Collection
This chapter provides a discussion regarding the research paradigm, research design research approach, methodology and research methods used in this study.

1.8.4 Case Study Results and Discussion
This chapter presents the findings of the research study.

1.8.5 Conclusions, Limitations and Recommendations for Future Research
This chapter concludes the thesis with conclusions drawn from the research findings, limitations of the study, and the implications thereof for future studies.

1.8.6 List of References

1.8.7 Appendices for Questionnaires, Interview Questions, Focus Group Discussions, Related Evidence

1.9 Conclusion

This chapter described and contextualised the study, introducing the research questions to be addressed in order for the research aims to be met, and set forth the methodology and research methods used in the study. Furthermore, the ethical considerations which apply to research and the researcher's role were underscored. Finally, working definitions for key terms used in this and following chapters were provided

EXPLORING ADOLESCENT SMART PHONE DEPENDENCE

Chapter 2: Literature Review

2.1 Introduction

When Donne penned "No man is an island entire of itself" (1624: line 1), it was a pertinent comment on society today. Whilst addressing the need to socialize, the internet has been a way of gratifying many needs and desires. The Uses and Gratifications Theory (UGT) employed to study people's media use since the 1940s, is entwined with other Psychosocial Theories such as Aldefer's Existence, Relatedness and Growth (ERG) Theory and Lewin's Field Theory in this study. However, newer theories such as Constructionism and Connectivism should also be included, since they cannot readily be discounted. Each of these theories will be discussed as they relate to the study of adolescent smartphone dependence, which adopts a blend of the theories. This will shed light on topics such as dependence, emotional well-being in adolescents, socialization, distraction, cybersecurity, education and management and suggest ways forward to improve adolescents' quality of life. The study is underpinned by the Cognitive Social Constructivist approach, locating it within a much larger field of information (Blaxter, Hughes &Tight 2006). The focus of the literature review is on collating and exploring published resources relevant to the study and attempting to ground this research in sound theory by illuminating key concepts. In so doing the literature will provide a context for the study and identify gaps in current research. The ongoing process of observing contemporary research, has enhanced my knowledge of the context and comprised a detailed review drawing on a wide array of sources, printed and spoken.

Sophocles' assertion that "Nothing vast enters the life of mortals without a curse" (cited in Shlain 2006:1) can be applied to the concerns raised about smartphones. Since the entrance of smartphones onto the world stage, adolescents have been assured of constant access to information via the internet, including many social media platforms. Questions have consequently been raised about the impact of smartphone technology on adolescents and the discourse on adolescent mobile phone use has steadily grown since 2004.The impact on the psychological (Theodisiou 2018), psycho-social and academic development of adolescents (Steyer 2016) has been brought into question. In the light of the influence of smartphones on the adolescent's lifestyle, research into the extent of

these effects became crucial. Students in the last three schools where I had worked, demonstrated the compulsion to reach for their devices and check social media in lessons. Inadequate self-regulation skills and cyberbullying were also issues in each of these schools. When I sought solutions to these issues there seemed to be a dearth of publications in educational research which suggest effective strategies for introducing balance in adolescents' lives. These observations lent credence to the importance of my research and justified the study. Thus, the questions raised about what could be done to address this problem of dependence; also gained impetus. Although the study sought to gain an understanding of the impact of smartphones on adolescents in Myanmar, a global understanding of the magnitude of the problem was required. Hence the extensive review of literature.

2.2 Defining Smartphone Dependence in Adolescents

2.2.1 Adolescence

Adolescence is defined by the World Health Organisation (WHO) as a stage in life where young individuals are in the transitional phase of growth and development between childhood and adulthood, aged 10 and 19 years (Csikszentmihalyi 2018).

2.2.2 Dependence and Addiction

2.2.2.1 Dependence

Dependence is identified as the state of relying on or being controlled by something or someone else (Foddy & Savulescu 2014). It refers to the state of being of a person's body and mind, such that the cessation of a drug or activity causes them to present physical and mental symptoms of withdrawal. These symptoms can extend from mild to fatal in nature, and are exhibited by irritability, feelings of discomfort, exaggerated mood fluctuations, anxiety and depression, insomnia, agitation and restlessness, headaches and either the suppression or increase in appetite (Futures Recovery Healthcare 2018). When one considers the statement "fatal in nature", smartphone dependence is not necessarily directly linked to fatalities, but as mentioned supra, bullying; warped body image and warped life perception associated with smartphone use, have been linked to suicidal ideation. Individuals who take a prescribed medication daily over a protracted period, can become dependent. When the drug is discontinued, they need to do it

gradually, to avoid the discomfort of withdrawal. The fact that individuals are dependent on a device, activity or medicine does not necessarily mean that they are addicted. This is elucidated infra.

2.2.2.2 Addiction

In distinction and supplanting dependence, addiction is considered to be a disease. However, like dependence, addiction can result from repeated activities such as gambling or taking drugs or medicine. The inability to stop taking the substance or performing the activity in the face of negative consequences from doing so, confirms addiction (The National Institute on Drug Abuse Blog Team 2017). To clarify negative consequences, these are consequences such as: jeopardising work by failing to fulfil obligations; jeopardising relationships with family and friends due to neglect; reducing social, occupational or recreational activities unrelated to the internet and harm to physical and mental health, to mention a few (CASA Columbia 2012; Shaffer LaPlante, LaBrie, Kidman, Donato & Stanton 2004). Therefore, individuals with addiction will continue to engage in the behaviour or use the substance, despite the resultant continued accumulation of problems and negative outcomes (Naim-Fell & Zangen 2013).

2.2.2.3 Commonalities between Behavioural Addiction and Substance Addiction

There are several features commonly shared by behavioural and substance use addictions. These are, compulsively becoming pre-occupied with an object, activity or substance and taking decisive actions to avoid feelings of discomfort as a result of the withdrawal from the substance, removal of the object, or cessation of the activity (Alavi Ferdosi, Jannatifard, Eslami, Alaghemandan & Setare, 2012; Potenza 2006).

Generally, any activity which becomes the primary focus of an individual's daily life in preference (or in exclusion) of other activities, could be classed as an addiction. Alternately if the behaviour has started causing the individual social, psychological or physical harm, it could also be considered an addiction (Grant, Potenza, Weinstein & Gorelick 2010). When comparing those who are not addicted with the above-mentioned features, removing access to the substance or behaviour would not trigger the overwhelming, obsessive pursuit and obstinate pre-occupation with the substance, object

or behaviour. Negative feedback from unwanted consequences would dissuade the un-addicted individual, but not the addict. (Naim-Fell & Zangen 2013).

Behavioural addictions and substance addictions demonstrate similar changes in the neural pathways of the brain's reward system (Nestler 2005). Due to this, the individual becomes irrationally preoccupied with pursuing reward from performing the behaviour (Nutt, Lingford-Hughes, Erritzoe & Stokes 2015). In addition, the aim of attaining relief from distress through the performance of a behaviour, causes the individual to struggle with desisting from the behaviour. Very strong urges and a difficulty resisting the same, will cause the addict to have limited insight into the problems that have developed as a result of their behavioural addiction (American Psychiatric Association 2000).

Some researchers and clinicians have suggestion that any activity, object or behaviour which rewards the individual with the sensation of pleasure, can result in the development of an addiction. At present, addiction is defined as a primary and perpetual malady of the brain wiring responsible for tempering motivation, reward and memory (Piper 2015). Areas of the brain that control emotional learning, incentive, learning and maintaining new behaviours, and anticipating reward, are further implicated in the development of addiction. (Kelivas & Volkow 2005).

2.2.2.4 Emotional and Physical Manifestations of Problematic Internet Use

2.2.2.4.1 Emotional Manifestations

Emotional Manifestations of problematic internet use may include: depression; feeling guilty or defensive about time spent on-line; being anxious and agitated about being able to go on-line and check social media; dishonesty (about internet use); isolation and loneliness; feeling euphoric when on-line and boredom with routine tasks; procrastination; no sense of time and an inability to prioritize in order to meet restrictions and schedules; avoiding work (Gregory 2019).

2.2.2.4.2 Physical Manifestations

Physical Symptoms of Internet Addiction Disorder may include: backache; headaches; insomnia; Carpel Tunnel Syndrome; neck pain; poor hygiene due to not bathing to stay online; weight loss or gain with associated poor nutrition; vision problems and dry eyes (Gregory 2019).

2.3 Consequences of Excessive Smartphone Use on Adolescent Well-being

2.3.1 Sleep Disruption and Disorders

Since the inception of my interest at the first school I worked, many students admitted to having interrupted sleep because they were sleeping with their phones on, checking messages during the night, surfing the web or engaging in on-line activities instead. I felt compelled to investigate. This behaviour unbeknown to me, is apparently typical of adolescents in developed economies (Hale & Guan 2014; Cain & Gradisar 2010).

The resultant effect is that teachers are confronted by listless students who do not perform optimally in class. Instead they are distracted by their smartphones and internet access, rather than being focused and participating in the class (Woods & Scott 2015). Adolescent sleep patterns are disrupted due to cheaper late night calls and cheaper night data (Thomée, Harenstam & Hagberg 2011), they are psychologically stimulated based on media content and the light emitted from devices, affects their circadian rhythm (Le Bourgeois et al 2017).

A study in the Sleep Medicine Journal by Hale and Guan (2014), found that delayed bedtime and shorter total sleep time among adolescents was most consistently related to media use. In a later study (2015), Glasgow University cited that teenagers were checking social media updates in the middle of the night, disrupting their sleep (Wakefield 2018). It discussed these issues at length, finding many teenagers so invested in social media and so worried about missing out on posts, that they logged on in the middle of the night in order to get updates leading to sleep deprivation.

2.3.2 Anxiety and Depression

The consequences of excessive smartphone use, have been a concomitant increase in anxiety, depression, warped body image and a lack of real connection to others. Adolescents report feelings of inadequacy and depression related to sites such as Instagram and Snapchat (Cramer 2017). Cyberbullying on Facebook and other social media sites has taken on problematic proportions and is difficult to control (Wakefield 2018). Additionally, adolescents, express feelings of disconnection and loneliness due to excessive cyberspace connection (Amatenstein 2018). Students who spent more than six hours online on weekdays outside of school hours were more likely to report that they were not satisfied with their life or that they felt lonely at school according to a report by the OECD (2015:4). Theodisiou (2018) reported that social media is having a negative impact on mental health and was considered a leading cause of childhood depression. A study by the Royal Society for Public Health in the United Kingdom (RSPH 2017), found that Snapchat and Instagram were the most likely to inspire feelings of inadequacy and anxiety, due to body image perceptions. Two-thirds of respondents said Facebook made cyber-bullying worse.

2.3.3 Other Health Concerns

The high Electromagnetic Frequency and Radio Wave exposure which occurs when streaming from the internet on smartphones, has raised concerns about the physical impact thereof. Several studies have been conducted into the effects of excessive radiation on cells and their epigenetic changes due to this exposure (Marinelli, La Sala, Cicciotti, Cattini, Trimarchi, Putti, Zamparelli, Giuliani, Tomassetti, & Cinti 2004). Further concerns are the subsequent possibility of malignancies, as well as consequent rise in Alzheimer's, childhood leukaemia (Yang 2017) and environmental changes affecting animals, birds, insects and even plants (Davis 2015). There is specific concern for the youth's exposure to radiation, particularly since their skulls are thinner and their heads can absorb more than twice, and skull bone marrow ten times that of adults (Ghandi, Morgan, de Salles, Han, Herberman, & Davis 2012).

Less time spent outdoors and being active resulted in attendant changes in vision, leading to an increase in short-sightedness. This seemed to have occurred due to a decrease in demand for differing visual accommodation. Further consequences were changes in

posture and "text neck" (Turner 2018) which describes various ailments people get from spending large amounts of time looking down at their smartphones. *CNN* writer Jacque Wilson explains the consequences of this position: "Staying in what experts call the 'forward head posture' can lead to muscle strain, disc herniation and pinched nerves. Over time, it can even flatten or reverse the natural curve of your neck" (Wilson 2012). Another study, focussing on myopic children (who spend too much time indoors in front of screens), found that the best remedy is to get children playing outside as much as possible. "Protective of myopia development is time outdoors – sport and leisure outdoors are protective of eyesight," (Sellgren 2018). Pickhardt (2012 para. 13) has three main suggestions, "take the child outside to take back the active pleasures of the outdoor life and connecting with the wonders of the natural world. Second, spend daily time with self and with family with all electronic devices and screens turned off. And third, invest lifetime in meaningful offline, non-spectator, and resourcefulness-building activities like helping, volunteering, playing a sport, exercising, creative expression, inventing, problem-solving, learning something new, or working on a hobby or project or for a good social cause".

2.3.4 Loss of Rudimentary Skills

Less obvious risks may be the decrease in small motor skills due to keyboard manipulation, diminished handwriting ability and associated decreased neural pathway formation. This is important because these skills are still required for cutting and manipulating instruments in everyday life and a wider range of skills, not just keyboard focused, points to greater brain stimulus and more varied capabilities. There was also a reduction in analogue clock reading, which is at least a mathematical skill and at most an abstract depiction of the concept of time sweeping over 12 hours. Payne (as cited in Hill 2018) suggests that some parents find it easier to give a child a phone or an iPad, than encouraging muscle building activities such as cycling, climbing, cutting, sticking or household chores. Children and adolescents are losing pen and pencil grip and Payne says senior paediatricians are blaming excessive use of technology for this lack of foundational skills. Much as this is a technological era, it seems wise to be more prepared with a wider range of skills, than narrowly focused on technology and mechanised operations only. "In our rush to reject the old and embrace the new, children may end up placing too much trust, too easily, in the wrong places" (Botsman 2017:106).

2.3.5 Divided Attention

Newport (TEDxTysons 2016) underscored that social media keeps us in a "state of fragmented attention" which results in a "permanent reduction in the capacity for concentration". He paraphrases Lanier "these companies offer you shiny treats in exchange for minutes of your attention and bites of your personal data, which can then be packaged up and sold" to explain how personal information is harvested unwittingly. The adolescent drive for instant gratification and dopamine addiction, predisposes them blissfully unaware of and unconcerned about how their personal data is harvested and used. Newport stated that "major social media companies hire individuals called attention engineers, who borrow principles from Las Vegas casino gambling, among other places, to try to make these products as addictive as possible". The "always stay entertained" habit of mind is one of the most problematic for parents, educators, and journalists. " Kids today seem to be always consuming media — watching TV, listening to music, talking on the phone, surfing the net, instant messaging, and all at once. With limitless access to NDM (New Digital Media) and to each other, there is always something to consume or someone to engage with" (Weigel & Heikkinen 2007:43).

A fairly trendy acronym was coined in 2004 by Patrick Mc Ginnis in the Harbus, to explain this constant need for digital connectivity. It is called FOMO – the fear of missing out (Kozodov 2017). The Millennial problem of being used to "instant gratification" and suffering from "systemic impatience" (Sinek 2017) is part of being constantly connected to endless resources. Dimock (2018) defines "Millennials" as a name given to individuals born between 1981 and 1996 (ages 22 to 37 in 2018) and "Postmillennials" those individuals born from 1997 onwards. They have also been named Gen Y and Gen Z or iGen respectively, but for the purposes of this discussion, we will continue to refer to them as Millennials and Postmillennials.

2.3.6 Internet Threats to Adolescents

There is a lack of awareness amongst adolescents of the real threats they expose themselves to when posting their photographs, account and identity information on the internet (O'Neil 2016) and expose themselves to data brokering. Adolescents are open to media manipulation, fake news and internet algorithm used to exploit them (O'Neil 2016). They are vulnerable to sexual exploitation (UNESCO 2012). Sexting amongst underage adolescents has become an issue (Chalfen, 2009; Lippman & Campbell 2014). Widespread age inappropriate material is available on social media (pornographic or violent). At the other end of the risk spectrum, "children may be bullied, harassed or stalked (referred to as child 'luring') and/or coerced, tricked or persuaded into meeting strangers off-line, being 'groomed' for involvement in sexual activities and/or providing personal information" (UNICEF 2012:22-29).

Some gamers display behaviour which appears so bizarre, that they report playing for hours without drinking, eating, or sleeping. They even elect to wear diapers so they do not have to stop playing to take bathroom breaks (Nakaya 2015). In two extreme examples of excessive gaming, Taiwanese gamers died after continuous marathon game-playing sessions (Hunt and Ng 2015).

2.4 Extent of Adolescent Smartphone Dependence Worldwide

Taylor and Silver (2019) have found that the age gap in smartphone ownership had been steadily increasing in most emerging economies. This meant that smartphone ownership in the 18 – 34 year old age category outpaced ownership in other age groups, but did so in almost all economies. Taylor and Silver (2019) discovered that this younger age group also used social media significantly more than the older age groups. Therefore, these emergent economies demonstrated technology use much more commonly among young people and those who were well-educated. This did not mirror the trends in many advanced economies, where in the age groups 35 – 49 years and 50+ years, smartphone ownership was on a par with the youngest age group. However, "younger people in every country surveyed are much more likely to have smartphones, access the internet and use social media" according to the Pew Research Report of February 2019 (Taylor & Silver 2019: para. 3). The main criticism of much of the research and literature available concerning smartphones, is that although red flags are raised about numerous issues, no

effective strategies are recommended and no unified 'call to action' is heard. From the literature I perceived that a general sense of concern has developed worldwide about the movement of younger people (below the age of 30) towards heavy internet and social media dependence, yet no potent action plan is proffered.

Over 42 countries have signed protective policies to enact measures to assist their citizens regarding radiofrequency radiation and public health (Davis 2015). This is not to say that these policies are implemented or enforced, but at least there is awareness of issues of concern. There have been many anti-Fifth Generation Cellular Network Technology (5G) campaigns worldwide over the last few years, which are opposing the roll-out of 5G. Some governments, notably Denmark, Finland, France, Sweden, the Netherlands, the United Kingdom, Belgium and Switzerland are expressing misgivings about levels of radiation and electro hypersensitivity in children. Six nations have signed the "Cohort Study of Mobile Phone Use and Health" (Denmark, Finland, France, Sweden, the Netherlands, and the United Kingdom) and are each conducting their own independent but similar study into the matter. According to a 2016 Global System for Mobile Communications (GSMA) report, the number of unique mobile subscribers worldwide is more than 5 billion. This means a simultaneous rapid increase in new communication technologies, like smartphones and wireless internet.

According to Kemp (2019) 360 million first time internet user accessed the net in 2018, at a rate in excess of 1 million a day. This brought the percentage of internet users to almost 60% globally and the time spent on-line by the average user was more than 6½ hours daily. As far as social media is concerned, it accounted for 280 million of those users connected to the internet. Young adults and adolescents have the greatest share in social media and internet use, and concerns about problematic internet use are steadily rising. It is almost as though a type of mesmerism is exuded by the globality of the internet and the putative treasure trove of possibilities with which it teems. Has this opioid affected the scientific rigor of researchers seeking to find real solutions for the smartphone excess?

2.5 Extent of Adolescent Smartphone Dependence in Myanmar

Myanmar's telecommunications sector has evolved phenomenally since reforms in 2013 (being serviced by a single operator – Myanmar Post and Telecommunications). Subsequent price drops and expansion of coverage has resulted in greater connectivity. Smartphones are the dominant phone used, but slightly less so in rural than in urban areas, due to their price and rural poverty, according to the Myanmar Living Conditions Survey (MLCS 2017). The survey revealed that smartphone penetration was very high, at 93 % of urban households and 86 % of rural households. This indicates that most households in Myanmar have moved directly to purchasing smartphones "leapfrogging" earlier technologies (MLCS 2017).

Although Myanmar is an emerging economy, Smartphone use is on the increase in the country. This increase is distributed inequitably between the sexes. Men have free access to phones but phones are deemed less important for women, since this could lead to their "moral degradation" (MLCS 2017). This is further compounded amongst the less affluent, who of necessity share phones. Girls are unlikely to own a phone and their online access is usually via the phone of another senior female family member (sister, mother or aunt).

The male members of Myanmar society are not limited by cultural norms in as far as cell phone use is concerned. However, fathers may choose to limit their daughters' access to the internet, supposedly to reduce chances of girls eloping or being preyed on sexually. Consequently, in the general Myanmar population, girls' primary use of phones is merely to keep in touch with friends and family. Compared to global trends, Myanmar girls and women are 28% less likely to own a mobile phone than Myanmar men and subsequently fewer girls in Myanmar use the internet or have Facebook accounts than their global counterparts (Bartholomew, Calder, Shwesin, Niang Theih, Democracy, Premchander & Caulfield 2018). Unlike girls, boys are considered to be above menial household tasks such as cleaning, washing clothes or dishes and caring for the young or aged. This provides them with more leisure time to spend on mobile phones if they have access to them. Because traditional gender roles in Myanmar favour men as the economically active family members, there is a substantial disparity between male and female income, significantly in rural areas.

This has the effect of limiting women's (and therefore girls) ability to afford data. The household member who is gainfully employed or a student is given priority access to the mobile phone. By inference this is often not a female family member. The primary motivation for owning a mobile phone was as a means of communication. Nevertheless once connected to data, usage tended to expand to business communication, social status issues and entertainment. According to the MLCS (Myanmar Living Conditions Survey 2017), both male and female users wanted phones capable of connecting to the internet. The drive was to appear 'modern' and not 'outdated', and simultaneously, financially competent.

2.5.1 Economic and Cultural Factors Driving Adolescent Smartphone Use

As mentioned above, all over the globe disposable income determines the type of phone (smartphones being more expensive) and ease of access to data and Wi-Fi. In many emerging economies where the role of women is seen as secondary to that of men, or the female role is seen as one of chastity and demure subservience, women have restricted access to phones and the internet (Bartholomew et al.2018, Rowntree 2019). Although about 83% of households in Myanmar own mobile phones, of which 78% are smartphones, mobile data is expensive and therefore used less, specifically by women and rural users (Bartholomew et al.2018:47).

2.5.2 Proponents and Opponents of Smartphone Proliferation

As with most subjects, there is dualism and balance concerning the proliferation of smartphones. Some literature supported the rapid growth and dissemination of smartphones. Amongst the alluders to this idea were de Bruijn et al (2013:127) and Fernandez (2018) who mainly saw smartphones as "an engine of development" and a tool for enhancing economic activities, respectively. Several studies in Myanmar also focused on smartphone ownership as an indicator of progress and economic emergence, such as the Myanmar Living Conditions Survey of 2017 and the Myanmar Girl Landscaping Report of 2018. Mark Zuckerberg and Apple clearly have vested interests in increased smartphone and application use. According to Wakefield (2018), parent groups and welfare experts urged Zuckerberg to close down Messenger Kids, which is a messaging application developed for children, saying it was irresponsible to encourage

pre-teens to use the platform. Facebook countered that Messenger Kids provides a safe alternative for children and that it was "responding to a need".

Dilts (2018) reported that two investment groups holding huge Apple stock had called for digital locks to control youngsters' technology use more effectively. They were concerned that Apple's market value and reputation could be damaged if it didn't address growing concerns about smartphone use.

There are many opponents of large scale technology use, notably people who are intimately acquainted with the risk-potential latent in products which facilitate internet use, such as smartphones. Former Silicon Valley employees, futurists, data scientists; social psychologists and computer scientists are amongst them. Names such as Newport (2016); O'Neil (2016); Leonhard (2016); Sinek (2017); Zuboff 2019) and Raskin and Harris (who founded the Center for Humane Technology in 2013) have all written and talked extensively about the power and potential dangers of technology for modern society. The issue is not the paucity of warnings, it is more a lack powerful influence to effect real change in policies and society.

Theodisiou (2018: para. 6) was quoted supra as saying "I do think it is a big problem and that we need some rules" and Rębisz and Sikora (2016:194) have reminded that "Research on Internet addiction, initiated by Kimberly Young at the end of the twentieth century, usually appears in the literature in the context of young people, who have been found to be most vulnerable. The phenomenon is known as Adolescent Internet Addiction", yet to date no significant sequelae have been seen. Cramer (2017) asked for specific changes in applications which notify the user or end after a person has been online for a specified period of time, as well as watermarking digitally manipulated photos. She also called for schools to present lessons on how to use social media in a healthy way.

As mentioned supra, there is no universal, pragmatic plan, nor a logical and succinct way forward in palliating the mushrooming smartphone dilemma. Further expert research into this problem is required in order to find effective, implementable solutions.

2.6 Theoretical Framework

2.6.1 Introduction

No standardized diagnostic criteria and measures have been selected for problematic internet use and there seem to be no consensus regarding naming or categorizing it. Social scientists, natural scientists and mental health professionals research it differently and there are differences in approach across cultures and ethnic groups. These differences produce quite disparate results. Consensus is needed to improve reliability across studies and to develop effective recommendations. This situation is reminiscent of the Hindu parable of the six blind men and the elephant, where each blind man feels a different part of the elephant's body, and only that one part is then used to describe the whole elephant. Although the individual descriptions differ vastly, they are all in essence describing the elephant (Goldstein 2010). So also, have been the various attempts at describing and quantifying internet use problems. Although there is no agreement about how to label or classify the phenomenon, the fact that there are treatment seekers who want a cure for their malady suggests that the malady exists and needs attention.

The theoretical framework of any study are those theories which present a clear picture of the subject matter and will infuse all aspects of the study (Trifiletti, Gielen, Sleet & Hopkins 2005). The theories on which a study is based, run through the dissertation. Hart (1998:27) asserted that the literature review plays a role in relating ideas and theory to applications. Qualitative research methods have a theoretical basis that steer the study, focusing on the development of a theory posteriori during the data analysis phase (Munhall & Chenail 2008).

"Information that is gathered for a dissertation needs to always be interpreted through a theoretical framework in order to offer a clear explanation of what has been found or the researcher risks being saddled with the previously mentioned 'limited uselessness of findings and conclusions'" (Sarter 2006: 494). Therefore, the literature review, methods and analysis are also established on the theoretical framework (Grant & Osanloo 2014). The function of the chosen theories is further, to select suitable research methods, identify potential threats to the trustworthiness of conclusions drawn and to justify the research (Maxwell 2004: 33-34).

Considering that social psychology seeks to understand individual behaviour in a social context, and that adolescents' relationships with smartphones and the internet are dynamic social interactions, I chose to adopt a theoretical framework which addressed these elements. An argument was made for those elements of Social Constructivist Theory which could be integrated with Constructionism, Connectivism, Field Theory, ERG Theory and Uses and Gratification Theory in a synergistic relationship. This demonstrated the viability of these models by using an example of how they were operationalised in this research project. Cognitive Social Constructivism, as impacted by Use and Gratification Theory, Existence, Relatedness and Growth Theory or ERG Theory, Field Theory and Uses and Gratification Theory, drew on facets of constructionism and connectivism to support the research approach of qualitative research, in the form of an exploratory case study. This case study used these theoretical frameworks to understand the use of smartphones by adolescents in Myanmar. A summary of the various theories employed is included infra and will be expanded thereafter.

Table 1 SUMMARY TABLE OF THEORIES

Name of Theory	Author	Summary of Meaning
Cognitive Constructivism	Piaget	The construction of meaning and knowledge through personal experiences.
Social Constructivism	Vygotsky	Similar to Constructivism, but focusses more on the collaborative nature of learning within a specific cultural or community context.
Constructionism	Papert	This is a learning theory which postulates that learning is a reconstruction of knowledge, rather than a transmission thereof.
Connectivism	Siemens	This theory states that learning occurs whilst knowledge is distributed across a network of connections.
Field Theory	Lewin	The proposition is that changes of an individual's "life space" depended on that individual's internalisation of external stimuli (from the physical and social world).
Uses and Gratification Theory	Katz	This theory suggests that individuals use media to obtain certain gratifications
Existence, Relatedness and Growth Theory or ERG Theory	`Aldefer	In this theory, the Existence element is concerned with providing the basic material requirements of humans. The Relatedness element has to do with people's desire to maintain significant interpersonal relationships and the Growth element is identified as the intrinsic desire for personal expansion.

2.6.2 Cognitive Social Constructivism

This theory refers to the construction of meaning and knowledge through personal experiences, working together, observing others, modelling and connecting via technology. As Vygotsky (1978:83) says, "Learning is more than the acquisition of the ability to think; it is the acquisition of many specialised abilities for thinking about a variety of things." Social constructivism focusses on the collaborative nature of learning within a specific cultural or community context. Smartphone use connects adolescents to various on-line cultures with their own language and conventions, and to social communities such as Instagram and Facebook. Here adolescent are influenced by information, stimuli and feedback that impact their construction of meaning and value. Another reason for the use of this framework was that the data could be extracted from the subjective feedback and experience of the sample group. The theory was also suited to this study because it looks at social factors (peer norm), media influence and individuals' learning through observing others (Bandura 1986). In addition it views individuals as "self-developing, self-regulating, self-reflecting and proactive" and looks at human action as operating specifically in the following modes: forethought (individuals' ability to anticipate the outcome of actions); intentionality (individuals' decisions to engage in certain activities); self-reactiveness (individuals' ability to regulate behaviors); self-reflectiveness (individuals' ability to reflect on and evaluate their cognitions and behaviors) (Pajares, Prestin, Chen & Nabi 2009). I contend that these skills of reflection and self-regulation are underdeveloped in adolescents, which is what potentially leads to problematic internet and social media use. Social Cognitive Theory also looks at being aware of what is considered right and wrong and the influence of possible rewards and incentives to act in a specific way. These elements of the theory connected significantly with adolescents' decisions and motivation to use smartphones and how frequently they did so, which is the focus of this study. Additionally, the rewards and incentives elements connected the ERG Theory and Use and Gratification Theory.

2.6.3 Constructionism

Constructionism is a learning theory which postulates that learning is a reconstruction of knowledge, rather than a transmission thereof. It views learning as most effectively accomplished as part of an activity undertaken by the learner, from which the learner then constructs a meaningful "product" (Papert 1980).

Although Papert's theory of Constructionism was accurate in its positive emphasis on student-centred discovery learning, which has subsequently expanded into the field of educational robotics, student engagement in technology has been matched by engagement in internet use. It is possible that Papert (1980) did not fully foresee the negative impact which technology use could have on students. The research from this study was able to support the theory of Constructionism, since students used a wide variety of digital tools to create meaningful end products both in class and in their leisure time. In addition, it is very relevant in its application to today's constantly connected world and adolescent challenges of managing this constant connection. Papert's vision of one computer for every child seems to have become feasible with the launch of the smartphone.

2.6.4 Connectivism

Connectivism is "the thesis that knowledge is distributed across a network of connections, and therefore that learning consists of the ability to construct and traverse those networks" (Downes 2007: para. 6). In essence it is a learning theory which explains how the Internet and related technology have made opportunities for sharing and learning. This sharing can change paradigms for adolescents so that they rethink their identities, prejudices and relationships. The very essence of the theory speaks to this study, since it is how role players in the sample conduct and construct their knowledge and social connections in the digital age. Connectivism was found to be a primary way in which adolescents saw themselves located in the world; constantly connected as mentioned supra.

2.6.5 Uses and Gratifications

This approach suggests that individuals use media to obtain certain gratifications (Blumler & Katz 1974). The uses and gratifications approach was formulated by media scholars in response to the media effects paradigm, which conceptualized mass media audiences as passive users and easily influenced by media. In contrast, Blumler and Katz (1974) proposed that audiences are active users of mass media who use media to obtain certain gratifications. The theory is used to understand why and how people actively seek out specific media to satisfy specific needs. Previous studies have employed this approach to study mobile phone use amongst individuals and have concluded that the uses are mainly for the gratification of interpersonal needs such as socialising and connection for individual safety reasons. This study sought to use this theoretical perspective to examine what the different communication, social and satisfaction needs of adolescents in Myanmar are in terms of using smartphones. The proposition is that individuals use smartphones mainly for a sense of social gratification (virtual community and relationship pursuit and maintenance) but also as a diversion, for information seeking and for social and personal status (Song, Larose, Eastin, & Lin, 2004). In this study I explored how adolescents express autonomy and independence from their parents in certain internet activities and how they feel that they can express their individuality on-line. I was also interested in whether they viewed cyberspace as an alternative to their own world and whether they saw it as a realm of unlimited sustenance.

2.6.6 Existence, Relatedness and Growth Theory (ERG Theory)

Abraham Maslow first created his theory of needs in the early 1940s, identifying the basic needs human beings have, in order of their importance. These are: physiological needs, safety needs, and the needs for belonging, self-esteem and self-actualization. Many theorists followed and built on this work including Clayton Alderfer. He developed Maslow's hierarchy of needs by categorizing the hierarchy into his ERG theory (Existence, Relatedness and Growth) as pictured in the image infra.
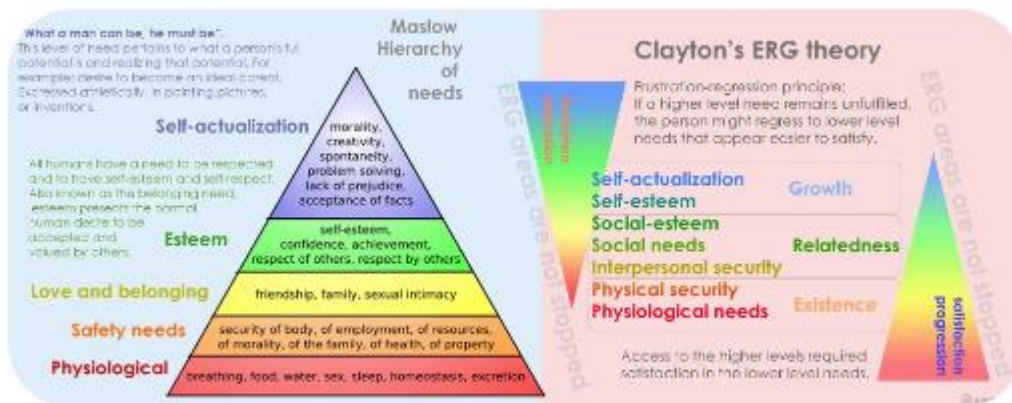
Figure 1. Clayton Alderfer's ERG Theory vs Maslow's hierarchy of needs
https://www.pinterest.ph/pin/473511348314647800/

The Existence element is concerned with providing the basic material existence requirements of humans. These include items that Maslow considered under the physiological and safety needs categories, which Alderfer categorised as lower order needs. The second group of needs is that of Relatedness. This is the desire people have for maintaining significant interpersonal relationships. These social and status desires require interaction with others if they are to be satisfied, and thus align with Maslow's social and self-esteem needs. Alderfer identifies Growth needs as the intrinsic desire for personal expansion. The Growth category also contained the self-actualization and self-esteem needs, so that there is a resultant blurring of which of Maslow's needs fit into which of the ERG categories (Yang, Hwang & Chen 2011). Contrary to Maslow's theory, Alderfer's ERG areas are not "stepped", in other words they do not require satisfaction of one need to move onto the next. He additionally proposed a regression theory to go along with the ERG theory. Adolescents have a particularly strong need for belonging as described by the Relatedness category. They also have a need to be able to pursue knowledge, to be competent, to control their own destiny and to be independent, all of which fall into the Growth category (Yang et al. 2011). He said that when needs in a higher category were not met, individuals invested greater effort in lower category needs, since they appeared easier to satisfy. This rings true of many parents' reports that their children resort to on-line games to achieve success whilst they do not succeed at school. Such behaviour may indeed be because they find the on-line environment easier and non-threatening. This seems like a type of regression, albeit that it placates adolescents' self-

esteem. This study explored whether problematic smartphone use is a response to discomfort and failure in the concrete world for adolescents.

2.6.7 Field Theory

Gestalt theorists suggested "looking at the whole rather than its parts, and at patterns instead of isolated events" (Ormrod 1995). Lewin who was one of their ilk, expanded the theory by proposing that changes of an individual's "life space" depended on that individual's internalisation of external stimuli (from the physical and social world) into the "life space". He also defined a behavioural model in which there are "a dynamic balance of forces working in opposing directions". These he defined as driving forces, restraining forces, and equilibrium. Driving forces push in a desired direction causing change and a shift in the equilibrium. Restraining forces oppose the driving forces and hinder change, resulting in a shift in the equilibrium. Equilibrium is a state of being where driving and restraining forces are equal and no change occurs (Malone 2001). In adolescents we see an exaggerated version of this theory, as they navigate through a variety of stimuli attempting to make sense of them and deciding what the best course of action is. Lewin's proposition that behaviour is the result of the individual and the environment holds true especially for adolescents who are being bombarded by a constant stream of digital lures. This study seeks to uncover the extent of the environmental impact on adolescents and to propose a reasonable course forward. For future research, validated and reliable measures of Problematic Internet Use (PIU) should be sought, since the diagnostic parameters are very broad and nebulous. This will require collaboration from respected scholars in the field.

2.6.8 Conclusion

This is an era of rapid technological innovation, where various forms of technology are integrated into classrooms and daily life. Dependence on devices which were meant to improve humans' lives, has brought with it a vast range of attendant problems. This study could bring insights into the management of adolescents' smartphone use and improve their quality of life. The research paradigm and methodology utilised in this research study will be described in the following chapter.

EXPLORING ADOLESCENT SMART PHONE DEPENDENCE

Chapter 3: Research Design, Methodology and Data Collection

3.1. Introduction

In the previous chapter a review of literature was done in which the Uses and Gratifications Theory (UGT) entwined with other psychosocial theories such as Aldefer's ERG Theory and Lewin's Field Theory as well as newer theories such as Constructionism and Connectivism, were discussed with regard to their relevance to adolescent smartphone dependence. Topics such as addiction, emotional well-being in adolescents, their socialization, distraction, cybersecurity, education and smartphone management were also discussed.

This chapter describes the research paradigm, the approach, design and the research process followed during the data collection phase.

The aim of this research was to explore smartphone use among adolescents. This research was exploratory in nature. Exploratory research speaks of the investigation of a problem which needs clarification. It is conducted merely to explore and improve understanding of an existing problem. Because of these features of exploratory research, it lays the foundation for further research (Babbie 2007). The research was inductive in as far as it was used to generate concepts and themes from the findings collected from qualitative interviews. The deductive nature of the research lay in the fact that conclusions were drawn from specific trends evident in the data.

In order to pursue my research objectives I conducted interviews and observations, focus group discussions and administered online questionnaires. Thereafter the data obtained was analysed using content analysis.

3.2 The Research Paradigm

A research paradigm comprises four elements namely, epistemology, ontology, methodology and axiology (Lincoln & Guba 1985). Epistemology refers to how we know something and how we examine reality, whether objectively or subjectively. Ontology refers to what truth is, in other words the relationship between things and knowing them

(Bryman 2012) and whether one's view is realist or relativist; methodology is about how we will discover knowledge and axiology refers to what is valuable to the study or which values guide and influence the study.

The study employed a subjective epistemology which involved the interaction with a selected sample to find out what the lived experiences of the participants were. The study therefore fell within an emic approach (Killam 2015). The ontological approach of this study was relativist. The relativist approach does not adhere to a single truth; and it was appropriate in this study since the experience and perception of the participants was shaped by their environment and responses, thus making it multifaceted. In terms of methodology, a qualitative case study was used, infused with elements of phenomenology and grounded theory. This allowed for an in-depth research into participants' context and experiences, analysing them in a systematic way (Killam 2015). The axiological approach taken in this study was qualitative, with the research occuring from within the social group. The preconceptions and biases of the researcher had to be acknowledged while attempting to discover the values of the participant. Acknowledging my personal bias against excessive smartphone use at the outset of data collection, assited me in remaining neutral toward the findings (Lyon 2017). This had the effect of amending my thinking about smartphone use and how asdolescents relate to their smartphones. I became less judgemental and saw greater positive potential in the devices.

This study was located within the approach of qualitative research, in the design of an exploratory case study. This research paradigm is constructivist (McLeod 2018), within a social constructivist (Vygotsky 1978) theoretical framework. Both of these approaches refer to the construction of meaning and knowledge through personal experiences. The latter (social constructivism) focusses more on the collaborative nature of learning within a specific cultural or community context. According to Crossman (2018) qualitative research is a way of interpreting meaning from socially collected data rather than from numerical data and De Franzo (2011) defines qualitative research as research used to understand opinions and motivations. The reason for the use of this paradigm was so that the data could be extracted from the subjective feedback, experiences and interactions of the individuals in the sample group. Seeing that the focus of education has shifted

primarily to collaborative and group work, this seemed to further underscore the use of these approaches.

3.3 Research Approach

The qualitative research approach was adopted for this study. The qualitative approach has the following five research designs: phenomenology, ethnography, narrative, grounded theory, and the case study (Creswell 2009).

3.3.1. Phenomenological Study

In a phenomenological study, the researcher relies on the participants' perspectives to provide insight into what motivates them. A combination of methods is used to understand the meaning participants place on whatever is being examined. These methods include amongst others; conducting interviews, reading documents, listening to audio files, and watching videos to build sufficient data to look for emerging themes and may also include the use of participants to validate your findings (Creswell 2009).

3.3.2 Ethnographic Study and Digital Ethnography

Ethnography, refers to an attempt to understand what is happening in the natural setting where the data is being gathered and then interpreting the said data to deduce implications for the study (Young 2019). Researchers therefore observe and/or interact with participants of a study in their real-life environment to glean a first-hand experience of the study participants' environment. One drawback of ethnography is that data is generally not coded into categories where it is collected in the field and finally, the data is interpreted explicitly in terms of what human actions mean and what their purpose is (Reeves, Kuper & Hodges 2008). Although ethnography was popularised by anthropologists, who approach culture as participant-observers, it has subsequently been applied across many of the social sciences. Ethnography has evolved with the rapid expansion of technology to incorporate digital ethnography, where smartphones, social media and online blogs and vlogs as examples, are employed (Crockford 2019). For the purposes of this study, Digital Ethnography was considered but was never employed eventually.

3.3.3 Narrative Study

A narrative study focuses on one or very few individuals and studies their experience and "life story" by reporting on and documenting it. Narrative researchers often "describe in detail the setting or context in which the participant experiences the central phenomenon" (Creswell 2008:522). This setting could be their sports facility, workplace or school to mention a few. Narrative study allows us to discover the 'real subject who is present in the world' (Denzin 1989b:14). Because the study involves the recounted experiences of individuals, it is by nature a flexible and fluid form of study which relies heavily on the relationship between the researcher and the participant (Pinnegar & Daynes 2007).

3.3.4 Grounded Theory

The goal of grounded theory is to generate a theory built up inductively and systematically, based on observations (Denzin 2002). According to Green et al. 2007 (as cited in Du Plessis & Marais 2015:3) "grounded theory methodology is a systematic set of procedures used to develop theories of psychosocial phenomena through iterative analytic movement between empirical data and emerging theoretical constructs".
Furthermore, an important feature of grounded theory, is that the theory is "grounded in data" which means the analysis and development of theories happens simultaneously with data collection (Moss, Gibson & Dollarhide 2014; Larose 2015).

Grounded theory is ideal for exploring the social behaviour and relationships of groups where there has been minimal research into the circumstantial factors that affect their lives (Crooks 2001). A grounded theory in the constructivist paradigm, arises from the interaction between the researcher and participants. The researcher's perspective is included as part of the process. Whilst ensuring the anonymity, confidentiality and privacy of participants, the aim of this research design is to ensure that the lived experiences of participants are richly documented. The research should also be richly contextualized by ensuring that it is thoroughly rooted in the knowledge of phenomena (Corbin & Strauss 2008).

Grounded theory therefore includes collecting data and analysing the data simultaneously. It involves using the "constant comparative method" which evaluates new

data in the light of existent data in a consistent and continuous basis. Further, it involves forming categories and assigning codes to the data collected so that theories can be developed and revised from the outset right through to the end of the data collection and analysis process. According to Charmaz (2014) sampling, aids in building theory, not just representing a population.

3.3.5 Case Study

A case study is an intensive investigation of people of interest in their natural settings (Hancock & Algozzine, 2017:16). It involves developing complex understanding using the collection of multiple types of data sources. Case studies can be explanatory, exploratory, or descriptive. The value of the case study is that it can be used to explain a category or group such as an educational organization, event, or entity.

To research smartphone use among adolescents in a private international high school in Myanmar the single case study design was used within the qualitative approach. The single case study design was chosen because it is a flexible and efficient set of procedures (Nock, Michel & Photos 2007). A single case study allowed for more time and resources to be expended on a single group (Yin 2003). With single case studies the aim is to eventually generalize the intensive study of a single units across larger sets of units (Gerring 2004). Academic pressure, age, feelings of emotional connectedness and feelings of dependence on smartphones were some of the issues that formed an important context for my study. One of the conspicuous features which emerged during the study, was that this group of participants had grown up with smartphones and had never been educated to be equipped with self-regulatory tools. Subsequently these adolescents would not imagine a scenario where they would be without their smartphones and had scanty resources to deal with the extraordinary temptations integral to smartphone use.

3.4 Application of the Research Design

Research design is a logical structure of inquiry for data collection. The single case study (Nock et al. 2007) was the research design adopted for this study. The design requires careful sampling and equally careful collection techniques. If done well, Elmusharaf

(2012:5) says "surprisingly small number of interviews, narratives or focus groups can yield the data to answer your research question", which the qualitative approach allows for. It is a theoretical attempt to make sense of observations and findings.

3.5 Details of the Procedure and Methods

3.5.1 The Sample

A sample is a part of a population and consists of a group of subjects which are in that population (Flom 2018). Qualitative studies usually use small, non-random samples that can provide an information-rich data source within the area of study (Polit & Beck 2012:515). It was therefore appropriate to pick a sample of the adolescents at a private school in Myanmar as they formed an information rich data source. According to Kumar (2011:213), in qualitative research, data is usually collected to the point where there is negligible or no new information forthcoming. This is referred to as the data saturation point and at this stage it is appropriate to determine the sample size. This study had a sample size of 20, which was adjusted through saturation of data obtained from the participants. More staff participants than intended were initially interviewed, but some of the responses were redundant "dross", as Miles and Huberman state, "Field notes usually contain much dross - material unrelated to the research questions, either prespecified or emerging. There are such things as trivial, useless data" (1994:65). There were also many more volunteers for the Focus Group Discussions than needed, but provision had to be made for students possibly dropping out of the study and not showing up even though they had indicated a desire to be there. Since generalizability was not the main aim, participants who had experience, insight and understanding of the research topic were selected (Bolderston 2012).

3.5.2 Types of Sampling

Purposive sampling was the predominant form of sampling used in this study. Purposive Sampling also known as judgemental sampling, is a non-probability sampling method that selects a sample based on characteristics of a population and the objective of the study. Here the researcher attempts to obtain a sample most suited to her study (Elmusharaf 2012). Purposive sampling was suited to the sample of this study, since a homogenous group could be identified. Elements of convenience, opportunistic and snowball sampling strategies were also employed to a certain extent. Convenience sampling produces a group of individuals which cannot be called representative of the population from which it is selected. Instead, the sample is chosen because it is close at hand rather than being randomly selected. This suited my study because I had limited resources, and the fact that all the participants were affiliated with a school that was easily accessible to me, assisted my data collection.

Snowball sampling is when one data source nominates another potential data source that will be able to participate in the research studies (Glen 2014).
The following criteria were used to draw a purposive sample in this study:
The criteria for the choice of parents were that the parents would be resident in Yangon, Myanmar; have children at the target private high school in Yangon who are aged between13 and 18 years of age, the children and parents owning smartphones and having the means and capacity to be connected to the Internet.

The criteria for the choice of students were that they would be resident in Yangon, Myanmar; attend the target school; be proficient English speakers aged between 13 and 18 years, own their own smartphone and have the means and capacity to be connected to the Internet.

The criteria for the choice of staff were that they would be resident in Yangon Myanmar, work at the target school, with students who are aged between 13 and 18 years, own a smartphone and have the means and capacity to be connected to the Internet.

These criteria were carefully evaluated and refined after selection, so as to define cases that would provide detail rich data relevant to the specific research problem, whilst avoiding specific bias.

The sample consisted of:

1   Head of School
1   School Counsellor
3   School Teachers
10 Students
5   Parents

This gave a total sample size of 20.

Opportunistic sampling is used when the researcher makes sampling decisions during the data collection process (Cohen & Crabtree 2006). This is a common method in field research. As more knowledge of a setting is gained, the researcher can make sampling decisions that take advantage of circumstances as they present themselves. As research into the parent sample and availability grew, it became apparent that the English proficiency of some parents was low and snowball sampling would have to be used. Snowball sampling occurred in relation to the parent participants, where the parents were recruited by some of the student participants.

3.5.3 Data Collection Methods

The data collection methods used in this study were,
1. semi-structured interviews
2. focus groups discussions
3. parent questionnaires
4. observations
5. document analysis

3.5.3.1 Semi-Structured Interviews

Semi-structured interviews were found to be most useful in this study because of the qualitative nature thereof (Zorn 2008). Semi-structured interviews, as the name indicates, are not highly structured but are not unstructured either. In this type of interview, the interviewer asks open ended questions. Semi-structured interviews are carefully designed to elicit the interviewee's ideas and opinions on the topic of interest, but not with leading questions which will elicit specific (preconceived) answers. In designing questions for the interviews, I followed McMillan and Schumacher's guidelines for effective interviewing (McMillan & Schumacher 2010:358-359). I also took care not to influence the interviewee into answering in a certain way, nor to bring any kind of pressure to bear on the interviewee. Five members of staff were interviewed. Although the original plan was to interview parents face to face this did not happen because of social distancing and lockdown restrictions in place to contend with the Covid19 pandemic. To adjust to this new development, the interview questions were converted into open ended questionnaire and sent to parents. Parents were encouraged to seek the help of their children (who in this case were part of the sample) for clarification of questions where needed. This was in order for the questions to be clarified if there were any problems with the level of English of the questions and the parents' English proficiency. This measure of working with their children put the parents more at ease and they were less self-conscious, as Kim et.al (2003) and Murray and Harrison (2004) argued for e-mail respondents with language proficiency and speech impediments. The time flexibility of e-mail responses was also ideal for the "lockdown" situation resulting from the COVID-19 pandemic.

3.5.3.2 Focus Group Discussions

Focus groups "consists of a group of individuals who are asked questions about their opinions and attitudes towards certain products, services, or concepts" (CFI Education Inc.2019). Focus group discussions were included as a data collection tool, since they capture real-life data in a social setting and the interaction of group members can generate rich data. They are flexible and reveal information about the research subject that may not have been anticipated. Group dynamics also have the potential to reveal additional information which may not have emerged from individual interviews. The results they generate are quick and the cost of conducting them is low (Cole 2019).

Further, new knowledge acquired during the questioning can inform moderators to modify their questions in order to gather the most valid data (Hoets 2018).

The number of participants for the focus groups consisted of ten student participants. This was a homogenous group (all members were interested in the study and were attending the target High School) that allowed the individuals to feel comfortable and to share openly (Prasad & Garcia 2017). A dual-moderator focus group was initially considered, but because of the small number of student participants (ten students), the need to keep the data secure and the level of trust between the participants and the moderator, this was discarded in favour of a single-moderator focus group. All students were cautioned about disclosing the contents of the interviews with outsiders to the group. As a result of the social restrictions of the COVID-19 pandemic, the final focus group was a virtual synchronous focus group discussion, using the Zoom application.

3.5.3.3 Observations

Non-participant observations were used in the study. It is sometimes referred to as an unobtrusive method. Observation is a systematic approach to data collection in which researchers use all their faculties (senses) to examine people within a specific research field and record the observations. This type of observation involves prolonged engagement in the setting. Some elements of good observation technique according to Silverman (2006), are prolonged engagement, clearly expressed notations of how observing is done, methodical improvisation and adjustment to develop a complete understanding of the setting, focusing attention in some 'standardized' way, using a checklist to guide the observations, recording observations in great detail, taking the subject's perspective and contextualisation. The observation techniques are sensible procedures that could be reproduced. Participant observation involves the observer being a member of the group (Cohen, Manion & Morrison 2000). Observer bias should be avoided. Observer bias is the tendency to see what we expect or want to see (Fracher 1985).

Observation as a method has strengths and weakness. The strengths are, gaining good insight into the behaviour and interaction of the observed and seeing things that are often taken for granted by researchers exploring perceptions. The limitations are that the act of

observation may affect the behaviour of those involved. Also, the thinking behind the acts cannot be observed.

Student were observed in class during lesson time; at lunch time and at break time. These observations were used to supplement the interview data. The students were observed for the amount of time that they were on their smart phones and for frequency at which they checked them, how often they retrieved them even when they did not use them, how often they interrupted a class activity or conversation (formal or social) and they were observed as to where they kept their smartphones when not using them.

They were observed for their use of smartphones at different times of the day. In the classroom, specific behaviour such as focus on teacher, engagement in the lesson, student posture (since smartphone use tends to encourage a forward stooping posture), non-verbal signals and restlessness in terms of being distracted by their smartphone or wanting to check it. There was also observation of whether they could follow directions in class even if distracted, how the teacher responded to the student when the phone was used and whether students were reliant on their phones when asked to answer or share ideas. In a similar manner, students who were observed in informal settings at school (at lunch or at break) were observed for focus on and engagement in conversation with their friends, how many were seated alone using a smartphone and also their posture and distraction by their smartphone while in conversation. The number of these occurrences were observed and noted.

3.5.3.4 Document Analysis

The type(s) of documents which were analysed were school registration/enrolment forms and demographic documents. Once permission had been obtained from school authorities and school heads, documents for analysis were requested. Details about the participants were categorised into coded groups which revealed trends amongst gender and age.

3.5.3.5 Content Analysis

Content analysis was the method of data analysis used in this study. It was used to identify and categorise the reports and findings of previous researchers in the literature and also used to analyse interview transcripts and observation notes (Blanford 2016). Content analysis describes a family of analytic approaches ranging from impressionistic, intuitive, interpretive analyses to systematic, strict textual analyses (Rosengren 1981). One of the advantages of using content analysis is that we can analyse social phenomena via a non-invasive technique (Babbie 1992). This is in contrast to simulating social experiences and then collecting data. Although academic disciplines differ in approach to content analysis, they all involve systematic reading or listening to audio and video artefacts, which are then assigned to categories or themes with labels for the content. By systematically labelling the themes of a set of texts, researchers can identify patterns of content and so analyse meanings within the texts. Appropriate inferences can be made from evaluating these themes, patterns and categories (Krippendorff 2004), however the researcher must keep in mind his or her inherent preconceptions and biases while analysing documents so that the results remain an accurate representation of these themes and are credible, and valid (Bowen 2009). Content analysis can be used as either a primary method of data collection or as a compliment to other methods, supplementing research data. Because documents can provide background information, they are therefore helpful in contextualising research within a field (Bowen 2009). Another benefit of documents is that they are stable, unreactive sources of data. Content analysis can also be used to analyse social life by interpreting images from other cultural media by looking at how these are used and which context they are used in. This enables researchers to draw inferences about the underlying culture. More recently content analysis of digital material, primarily generated by social media users, has become an important source of data (Crossman 2018).

The data from the interviews and focus group discussions were both manifestly and latently analysed. Manifest analysis is the description of what the participants say by remaining very true to their actual words, describing what is obvious in the text. Latent analysis refers to the interpretation of the underlying meaning of the content of an interview. (Graneheim & Lundman 2003)

Each set of data was labelled by category and stored securely where it was inaccessible by others. Following the collection of all the data, the research objectives and questions were reviewed. Further to this, the contextual influences on the responses were investigated. Contextual factors interacted with one another. Data was then carefully read and coded. Themes were identified and a summary of these themes was made. Finally, the findings were interpreted and triangulation of the data sources was done. The impact of the contribution of these findings was then assessed and summarised. This was followed by making conclusions and recommendations.

An advantage of content analysis is that it facilitated systematic and replicable categorisation of the information I collected while allowing me to identify themes in the data. Another advantage of content analysis was that I could combine data from multiple sources and when I organised the data, synthesis and reduction occurred and it was easy to compare the literature with the data I had collected.

3.5.3.6 Progressive Focusing

A qualitative data analyst should interact with data constantly to refine the focus on the emerging and evolving themes. This is called progressive focusing. This process begins as data is being collected rather than after collection (Stake 1995). Hereby the researcher attempts to construct an interpretation of what text means. This means that the focus is on much data and a few cases rather than little data on many cases. Content analysis should be inductive in nature, not predetermined categories and should be organic and fluid rather than rigid and clinical (Erlingsson & Brysiewicz 2017). Rich descriptions are used to document the process of collection so that data is turned into concepts by being organised into categories. According to Blanford (2016) the researcher then looks at how concepts interact or influence each other and legitimises the data by evaluating alternative explanations which could refute the evidence.

3.6 Research Procedure

After the permission and consents had been granted, interviews, focus group discussions and observations were conducted on the school premises in specifically allocated venues.

The teaching staff were the first group to be interviewed. These interviews were between 30 and 60 minutes long and were conducted at school after hours or at the convenience of the teachers. Observation of the students started contemporaneous with the teacher interviews, meaning that students were observed during the same days as teachers were being interviewed, while not at the same time of day. Student observations also continued for a further two weeks. Preliminary analysis was conducted on the data obtained thus far to inform the focus group discussions and to guide the line of questioning.

A month later, focus group discussions were conducted with the ten students. These discussions lasted approximately one hour. A google document linked to the discussions was also created for students to add further comments and insights at their leisure and in the privacy of their personal space. This allowed for the individual voices in the group to be retained (Bolderston 2012:71) and for participants to co-create the research data (Bolderston 2012:71) These additions and entries were recorded on the Google document by a function of Google documents which records the person's name, the date and the time when the additions were made. Preliminary data analysis was conducted on the data obtained thus far, so as to inform the questionnaire sent with the parents and to guide the line of questioning.

The original plan was to interview parents. However, parents could not be interviewed face-to-face because of social distancing and lockdown restrictions in place to contend with the Covid19 pandemic. The interview questions were converted into open ended questionnaire and sent via e-mail to them instead. The questions were of necessity clear and self-explanatory in order to circumvent the potential of misunderstandings, since there was no face-to-face contact which would have been afforded by in-person interviews.

Email questionnaires were administered during the last two weeks of June 2020. My focus was on attempting to remain within strict time limits for each type of data collection, so as

not to lose the momentum of the data trends I was discovering. Only two of the five parent volunteers were in command of adequate English to answer the questions without the assistance of an interpreter. This made the process a little more time consuming, but since they could share their answers via email, it did not prove to be an obstacle. A brief review of the data collected from the parent interviews followed.

3.7 Credibility and Trustworthiness of Research and Data Collected

Credibility and Trustworthiness, as they refer to the deductions made about analysed data (de Bruin 2010), have already been defined and discussed in Chapter 1. These elements were highlighted because the qualitative data was subjective and contextual in nature. Rigor with regard to the accuracy of data collection, influences the believability of the research and the subsequent research findings (Slevin 2002). Great pains were therefore taken to ensure that the inferences drawn from the interviews and focus group discussions were evidence based (Marsden 2013).

Participant reviews and member checks were done at the conclusion of the interviews and focus group discussions. This was done by reflecting the answers which were recorded, back to the participants to verify the meaning which had been extracted by the researcher. When there was a need to clarify words and meanings or when ambiguities arose, participants were contacted by email and asked in detail what the meaning of their responses were until these had been clarified (Meho 2006). During this step, information was also cross-checked for its alignment with the initial purpose of the document, which was to reveal trends in adolescent smartphone use (Bowen 2009). Student participants were requested to edit and expand on the focus group discussion transcript (McMillan & Schumacher 2010) on an interactive Google document at their leisure. Futher, triangulation was employed to safeguard trustworthiness of the data as Daytner (2006) suggests, through the use of these multi-method strategies. Personal biases and potentially biased sampling were acknowledged. Only participants' accounts which were rich in detail, were included and the relevance of responses to the research questions was continually kept central.

3.8 Data Analysis and Interpretation

The research generated mainly qualitative data. Qualitative content analysis was used to assign codes directly to text data in conventional content analysis. With a directed approach, analysis was guided by a theory or relevant research findings which assigned initial codes to data. A summative content analysis involved counting and comparisons, usually of keywords or content, followed by the interpretation of the underlying context (Krippendorff 1969). Questionnaires provided additional data from this sample group to expand the value of contextualisation. Furthermore, data from the interviews with their parents and teachers corroborated these findings. Empirical data about age, gender, family size, length of residence in the country, location of extended family, religious influence, parental education were collected and documented to discover trends and themes associated with each element and how they were related to the problem.

3.9. Ethical Considerations during the Data Collection Process

A general email was sent to all the high school staff inviting their participation in the study. No individuals were specifically targeted and no duress was applied to elicit participation. When staff volunteered, the details of the study and what information would be required from them were carefully explained to ensure their fully informed consent. The privacy and confidentiality of their data were assured, since their contributions would remain anonymous and pseudonyms were assigned to all participants in every reference made to specific individuals. All data was securely stored in password protected devices.

In a similar fashion, students were invited to participate, intitially via general email, but also through posters explaining the study and inviting their participation. Participants were assured of their complete freedom to decline or to depart from the study at any point. The focus group structure and questions were submitted to those who had volunteered before the first focus group discussion, in order to gain feedback on any potentially sensitive questions. Utmost care was taken to maintain the dignity and the rights of individuals to feel free and secure during the research process (Blanford 2013). Parent participation was invited via their children and all the required explanations of the study, liberty to decline or exit the study and assurances of privacy and confidentiality were given in writing.

Every participant signed a consent form after perusing the contents and after clarification of any obscurities in the form were made. Examples of these are included in Appendix P and Q.

3.10 Research Site

The research site is a private school in Yangon, Myanmar. The school is an English-medium, co-educational international preK-12 school. It was founded in 1998 by a group of educators and business leaders. It serves both Myanmar and expatriate students living in Yangon. The school follows a college preparatory programme and high school students study a curriculum modelled on a U.S. high school programme that leads to a U.S. high school diploma. Advanced Placement courses are also offered. The student population can be broken into the following categories and numbers at Secondary level:

Australian 1; Bangladeshi 1; Canadian 1; Chinese 3; Italian 1; Korean 22; Myanmarese 312; Portuguese 1; Thai 2; South African 1; North American 5; most of which are local students 89% with Koreans coming a distant second at 6%.

The administrative structure of the school consists of a Director; a Head of Secondary (Principal of the High School) and Heads of the Middle and Elementary School. The parent body is composed mainly of Myanmarese and a few expatriates of various designations. The reason why I selected this school is because of the availability of a sample group with many uniform characteristics and also because of the ease of access to participants. Furthermore, this venue saved costs in terms of time and not having to travel to other venues, since students, teachers and parents habitually came to the school, largely on a daily basis.

3.11 Conclusion

In this chapter the research paradigm supporting the research, as well as the approach, design and research process were described. These were followed during the data collection phase, underlining the rationale behind the study, contextualising the study in the research setting and describing the participant selection. The next chapter will investigate the collected data and interpret the findings of the study. This will include a commentary of how the data was analysed and themes discovered. Finally the researcher's role in ensuring trustworthiness and credibility of the data and findings, will be detailed, including ethical considerations.

EXPLORING ADOLESCENT SMART PHONE DEPENDENCE

Chapter 4: Case Study Findings and Discussion

4.1 Introduction

The previous chapter described the research methodology, design and data collection methods which were employed in this study. The trustworthiness of the results, ethical considerations and limitations of the study were also discussed. In this chapter the research findings will be presented starting with the finding from the interviews, observations, focus group discussions, parent questionnaires and then those from document analysis.

The purpose of this research was to explore the level of smartphone use amongst adolescents at a private school in Myanmar was. This qualitative exploratory case study was conducted within a social constructivist theoretical framework (Vygotsky 1978) and followed a blend of phenomenological, grounded theory and ethnographic approaches to the analysis of the data. After immersion in the information collected, by reading the transcribed field notes repeatedly (Burnhard 1991), several categories emerged. These categories were evaluated as they related to the research questions and the literature review.

This chapter details the emergent themes and the findings which were made.
The major themes which were identified, were:
Amount of time spent on smartphones; Activities pursued when using smartphones; Motivation for performing these activities; Impacts of time spent on smartphones.

Thematic content analysis and constant comparison were used to analyse the data (Burnard 1991; Onwuegbuzie, Dickinson, Leech & Zoran 2009) and the themes were then compared with other studies described in the literature review in order to draw possible correlations between them. Based on the findings and these comparisons (Burnard 1991), the chapter then discusses the research findings related to the question of the level of smartphone use by adolescents at the private high school in Myanmar and whether this could be considered problematic by the school stakeholders. The impacts, consequences and implications of smartphone use by the adolescents in the school were therefore explored.

The views of the staff, students, and parents regarding smartphone use, as revealed in the data gathered during this study, are presented below. The responses of each group of participants will be discussed under the four thematic sub divisions. The discussion provides verbatim quotes of participants as a reference, illustrating each theme and associated subcategory.

4.2 Presentation of the Findings of the Study

4.2.1 Theme One: Amount of Time Spent on Smartphones

4.2.1.1 Staff responses

The staff participant were as follows:

The first participant was a 63 year old American female who had worked in high schools for 18 years and who had been at the site school for one year. The second participant was an American male, 36 years of age who had been at the site school for three years and taught at high schools for 7 years. The third participant was a 38 year old Filipino female who had been at the site school for 4 years and taught at high school for twelve years. The last two participants were the high school principal, a 60 year old male Briton who had been at the site school for 20 years and at high schools for 27 years and a school counsellor who was a female Bahamian, 46 years of age, working in high schools for ten years, and at the site school for 2 years.

The five staff members were unanimous about the time spent by the learners at the school on smartphones being excessive. The first participant (63 year old American female) who had been extensively involved in student performance testing and course selection had this to say:

"I think it's because they've grown up with this and don't know how to function apart or be disconnected. We see it as an intrusion. They see it AS personal space". (63 year old female).

Thus she expressed the opinion that smartphones have become an almost natural appendage to the younger generation whilst the older generation viewed them as an invasion into their lives. It was apparent that students chose to keep their smartphones on their persons in much the same way as an essential item of clothing. This was observed consistently during the student observations (Appendix G).

All the staff members felt that although smartphones had become a part of students' lives from a young age (usually at Middle School, aged 10 or 11 years), the ideal would be that they remain out of school activities, and that the laptop computers students were using at school were adequate. However, two participants moderated their responses by saying that smartphones "could" be incorporated into schooling.

Another respondent was emotive about smartphone use at school. He said:

"They're abusing the privilege of being allowed to use smart phones at school. Mainly by being on social media and posting or watching inappropriate content". (60 year old male).

Although he did not elucidate what he felt was "*inappropriate content*". He went on to say that the most germane response to smartphones at school was to

 "Ban them entirely!"

This participant belongs to the age group that did not grown up with smartphones, and whose children did not either. His was a lone voice amongst the staff participants asking for the ban of smart phones. None of the other staff interviewed felt that students' time spent on smartphones warranted extreme measures.

One participant felt that, since smartphones were such an integral part of the students' lives, they should be assimilated into teaching practice. He expressed it thus:

"*Technology such as smartphones should be leveraged to maximize learning. However, teachers should ensure that they are only being used in the classroom to achieve the intended learning outcomes". (38 year old female).*

The school counsellor *(46 year old female)*, supported the above view, saying that since smartphones are here to stay, they should be put to good use rather than demonised she called for smartphone "*integration in lessons".*

She supported her point by saying:

"I show them how to use the calendar, note and alarm functions in their phone to help them manage their time"

Thus she demonstrated that rather than allowing smartphones to be time robbing devices, they could be used as a time managing devices to organise and maximize students' time.

All but one staff participant spoke of the students' great displeasure at having their phones removed.

"They are NOT happy! [They will be] Eye rolling, slumping, stomping [or] hitting the wall"
(63 year old).

This was corroborated by both the student and parent participants, indicating that students were very keenly attached to their smartphones, whether they were actively spending time on them or not.

4.2.1.2. Student Observations

The observation of students showed high school students of both genders and all grades and age groups making use of their smartphones in class settings when they were not given permission to do so. According to the school handbook, they are aware of the parameters of smartphone use (Appendix K). These finindings were congruent with the Uses and Gratification theory's contention that individuals use media to obtain certain gratifications.

It was most common to see students with their smartphones in their pockets, rather than in their school bags or in their lockers. Smartphones were within easy reach and visible in the pockets of school uniforms and were often carried in students' hands. This made it easy to connect with their friends during a visit to the restroom (Appendix G), in between classes or at breaks. At least half the noted smartphone use (7/14) was elicit smartphone use (Appendix G). By that I mean that smartphones were used when it was expressly known that it was unacceptable to do so (e.g. during a quiz or instead of a specific classroom activity). During school hours, smartphones were mainly used for socialising, accessing information and for entertainment. These findings conformed to the Relatedness and Growth elements of the ERG theory, showing how adolescents value interpersonal connection and continually pursue growth by information acquisition through the internet. Similarly the fact they were desirous of constantly learning and absorbing more via their smartphones was borne out by Siemens' theory of Connectivism, which states that learning occurs whilst knowledge is distributed across a network of connections. All the supporting data for the observations is tabulated in Appendix G.

These observations were confirmed when students were approached in social settings in the lounge areas, outside seating and in the canteen, because their smartphone screens showed games and YouTube videos being played, photographs displayed on Instagram

and message "chats" on the smartphone screens. When students were asked in class about the activity they were pursuing on their smartphones, they would explain the game briefly or what had happened in the YouTube video or they would give information about what they were sharing with their friends. Sharing of this information became possible because a rapport had been built between the students and myself (Bolderston 2012).

These observations indicate clearly, that despite knowing that their phone use was not appropriate or essential to their school life and academic activity, most students had their smartphones ready in order not to miss out on any social interaction (Stone 2009; Bay 2017; Weigel & Heikkinen 2007). The fact that the students hid their smartphone use within the school suggests that they were aware of the problematic nature of their phone use, especially during a test or in exam preparation and study sessions. This contrasts directly with the student data collected during the focus group discussion, in which students professed to be in control of their smart phone use and said that it did not pose a significant problem.

It is also appropriate to note that there are no national or provincial policies governing smartphone use in Myanmar schools. Although some countries have promulgated such rules, there are also no international regulations on the smartphone use of school students.

4.2.1.3 Student Responses

Student responses were illuminating and reflective, in that they had insight into the fact that they spent more time on their smartphones than they should and would like to.
A grade 9 boy responded to the question, "Do you stay on-line longer than you intended on any of them [sites]? Why?" with the following reply:
"Yes, it's a constant chain of posts that continue to pull you in."

This was supported by two grade 10s and a grade 11:
"Yes, it's addicting which forced me to keep on using."(boy)
"Yes, one video leads to another and it just doesn't end" (girl.) "This is most commonly known as the YouTube Rabbithole (concept applicable to other medias)." (boy).

Three more grade 11 girls said that they felt that the smartphones were time devourers.

"I stay longer than I should because usually something comes up and I want to look it up. I see more posts on Instagram and I end up wanting to look at more."

"Yes, time goes so fast when I use phone".

"Yes, even if I put a limit on the time I spend online I choose to ignore it when the time comes".

Another student described the "click bait" and algorithms which are embedded on the explore pages and search bars linked to smartphones, as continually introducing her *"to so many posts and videos that seems to never have an end"(grade 10 girl).* She was very articulate about how social media was impinging on her time usage.

"Messenger, as I end up talking to some of my friends for way longer than I anticipate."

What struck me most about all of the student participants' responses, was an honest and unashamed insight into their phone use and an awareness of the problems associated with smartphones' easy accessibility.

Describing this lack of capacity to self-regulate in adolescents and a lack of awareness about data brokering and internet threats, O'Neil (2016) highlighted that adolescents are not sufficiently educated about media manipulation, fake news and internet algorithms used to exploit them. From the student responses, it appears that there is not so much a lack of awareness of data harvesting and online threats, but rather a lack of urgency about their impact on students' lives. Although Sinek (2017) and Newport (2016) paint a picture of vastly distracted adolescents with fragmented attention, having discussed these issues with the participants created a different impression. The latent content of the discussion (Thomas 2020) revealed students might be more aware and not as disconnected and disempowered as they are often portrayed.

All the student participants indicated that they were dependent on their smartphones to varying extents and had tried to limit their use. To support this, a grade 11 girl had the following to say:

"Yes, I have tried setting a time limit on each app so that it reminds me when I've been using a certain app for too long".

This was confirmed by another grade 11 girl, who had made a concerted effort to interact with people in a social setting.

"Yes, when I am in a gathering I try not to use phone but to verbally, physically socialise with people in the gathering".

Another grade 10 girl said she tried to limit phone use in social settings with family members her own age, and that they had turned this into a kind of game where they chide each other about using smartphones instead of speaking to each other.
"Yes, whenever my cousins and I meet, we all try to spend time together and stop ourselves from using our own phones. Instead of socialising online, we try to socialise with each other, and whoever uses their phone would get judged upon (in a joking way)".

The grade 11 girl went on to say that she managed the intrusion of her smartphone by removing it from her immediate vicinity.
"Also, when I realise I'm distracted while studying I throw my phone on my bed".

A male participant in grade 10 said that the way he managed the distraction and time sapping qualities of a smartphone, was to emulate a friend who had found a successful technique.
"I have attempted in reducing my screen time to 3 hours a day before, like one of my good friend has, with simply setting up a few alarms".

These responses from participants indicated a sense of responsibility and an awareness of having to self-limit smartphone use. Deductive analysis of this data indicates that the students have assessed themselves as spending too much time on their smartphones and have consequently taken constructive steps to regulate their own use. To compound this acknowledgement of dependence on and distraction by their phones, student participants said that they were generally unhappy about having their phones removed. A grade 10 boy formulated it as follows:
"It was very disappointing and frustrating whenever that happens because I have grown too attached to it and has a sense of ownership over it".

4.2.1.4 Parent Responses

The five parent participants were all mothers over the age of 45. The fact that no male parents participated could be attributed to Burmese culture. There is a very strong patriarchal structure in families, with males carrying much more status and power. Many of the roles, activities and duties that are deemed less important or valuable are relegated to females (Zainudeen & Galpaya 2016). In the light of this, it would be less appropriate for men to participate in interviews or questionnaires or to become directly involved in students' school activities or parent-teacher conferences. These functions are generally seen as a female duty.

Only two participants had a very good command of English. The other three participants were assisted by their children regarding translation of questions and answers. The students who recruited their parents communicated via email that they would be assisting them. This did not pose a problem since the children had no vested interest in altering the responses. In addition, the Burmese culture places a high value on respect for parents and elders, so that altering responses would be deemed disrespectful. All the children of parent participants were high academic achievers with a very good command of English. On perusal of the responses it also became clear that no attempt had been made to present the children in a favourable light, which seemed to confirm honest answers to the questions.

All the parents estimated that their children used their smartphones at home for a minimum of 4 hours per day. This effectively meant that the children were connected to their phones from the time they arrived at home from school until they went to bed. Two parents estimated this home use of smartphones to be at least 6 hours.

In response to the question, "Do you think this is too much? Too little? Please explain", the parents indicated excessive use by saying the following:
"*This is too much because their eyes are getting worse day by day*".
"*Too much. Sleep takes 10 hours, eating three meals takes 2 hours, and spending the rest 10 of 12 hours on device is too much*".

Parents also acknowledged that when they limited their children's phone use by removing them, they would

"complain", [become] "angry", "irritated", "frustrated and they yell back at me".

This points to dependence on smartphones in this sample.
It was not surprising that the parents were unanimous in their assessment that their children's smartphone use was immoderate.

Some parents felt there were definite physical consequences because of this, while others felt it impacted the children's academic performance and commitment to schoolwork.
"Yes because they are not focusing on their studies and just wasting their time playing games".

One parent felt that the Covid-19 stay-at-home restrictions had exacerbated the negative impact of her daughter's smartphone use.
"I think that she uses too much screen time especially nowadays because there is the quarantine. She wakes up very early in the morning and when I wake up she is already using her phone or laptop. I think this might be a little unhealthy for her but on school days she uses them less".

When asked what the potential ramifications would be if their children's smartphone use increased, three of the five parents felt that the worst consequences would be to their children's eyes. Three parents thought that unproductivity or laziness could impact their development and school performance, while one parent voiced concern about the effects on quality family time. One participant had this to say:
"They would lose contact with the real world".

Another salient feature of the parent responses was that they viewed the students' total screen time including smartphone use as having become more problematic during the stay-at-home online class time. Since almost all the virtual lessons and subsequent schoolwork are done on laptops, this had increased students' focus on devices exponentially. As a solution one parent suggest:
"less online classes and have more paperwork".

In conjunction with the above suggestion, all the parents acknowledge that their children were still engaged in activities which were not screen related, such as practicing

basketball, doing fitness exercises, skating, cycling, dancing, playing a musical instrument or playing with the family pet.

"and they are not forced to do any of these so they probably enjoy it".

Ultimately the consensus amongst parent participants was that smartphone use amongst their children was problematic, although one parent tempered her response by saying that at least the children were:

"still maintaining their grades and succeeding academically".

All the data collected pointed to the perception of excessive smartphone use amongst adolescents. Staff, parents and student participants were all in agreement that adolescents at the site school used their smartphones too much. The emerging question for me was how to quantify "too much" in an environment driven by smartphones. The adult participants confessed a degree of dependence on their smartphones and parents required their children to have smartphones in order to be contactable and empowered with applications such as Google Maps and Grab Taxi in the event that they were stranded away from home. It seems antithetical to insist on adolescents having smartphones on them at all times and then suggesting that they should not be tempted to be preoccupied with them. Lewin's Field Theory is an appropriate context for these responses, since changes in the adolescent's "life space" depend on their internalisation of external stimuli from the cyber world into their "life space". Likewise, the driving forces are not adequately opposed in the adolescent's life by the restraining forces, so that equilibrium is not easily attained. Aditionally, the momentum of increased smartphone use has not abated in the face of a multitude of influential opposing voices.

4.2.2 Theme Two: Activities Pursued When Using Smartphones

4.2.2.1 Staff Responses

The staff participants had an astute insight into students' smartphone activities. All the staff participants were aware that students prioritise social connection and therefore also prioritise sites that facilitate this behaviour. The uniform response from the staff, was therefore that students primarily frequented virtual sites which promoted social connection

and thereafter, sites which entertained and empowered them. This coincided with the data collected from the parents and from the Focus Group discussion.

The social media sites which were most listed, were Instagram, Facebook Messenger and Snapchat. Second to social media applications was YouTube, which fulfils an educational, entertainment and social role. The Chinese application Tic Tok was very popular for posting videos of users. Smartphones make video recording easy and this application facilitates uploading the videos. Besides YouTube as an information source, Reddit was mentioned by all participants as a valuable resource for knowledge and data. Here is more support for the growth element of Alderfer's theory, the reconstruction of knowledge from Papert's theory and the learning across a network of connections proposed by Siemens.

Two of the five participants felt that none of the sites were beneficial and that students on smartphones should:
"be using their phones doing research"(38 year old female).
"Researching. Accessing apps when teacher instructs them to do so" (60 year old male).

4.2.2.2 Student Responses

Borne out by both the staff and parent participants, the students acknowledged that the most used applications were those which assisted social connectedness, such as Instagram. YouTube was mentioned most often after that, followed by Facebook Messenger, Netflix and Reddit.

All of these sites which the student mentioned were problematic from the perspective that they either had a scroll feature allowing users to endlessly move down a ribbon of new data, or that they kept suggesting more and more videos and links which were triggered by previous searches and words typed into the search bar of the search engine. These sites are specifically geared to "hook" users into more use (O'Neil 2016) and as mentioned in Chapter 1, specialist teams with knowledge of gambling and algorithm construction are employed to design sites which are very appealing and desirable. The dopamine release delivered by these new stimuli also makes these sites difficult to resist. Why would adolescents stay away from something that feels good and rewards them? Here again Katz' Uses and Gratification theory was an appropriate context for these responses.

4.2.2.3 Parent Responses

Of all the parent participants, only one parent had a female child. I expected this to influence a difference in the activities and motivation between her online time and the other four participants' online activities. Unsurprisingly, the most important sites mentioned by all the parent participants, were social media and networking sites. The second important activities and sites were information and skill acquisition platforms. This supported the data obtained from the staff and from student participants during the Focus Group discussion. Two parent participants volunteered unique information about their sons, saying they enjoyed spending time respectively on:

"Training apps (skillshare, masterclass)".

"…some game that he calls with his friends and play (PUBG, Mobile Legends), Identity V Game".

The only female child of the five participants, spent time dressing up and taking photos of her fashion and make up.

"She expresses her artistry on Instagram and shares her passion with her followers. [and on] *YouTube because she likes watching dance videos since she is also a dancer and she sometimes also makes her own videos and posts them as well".*

Most of the parents were not averse to the sites their children spent time on and felt that some of the sites were educational and provided enjoyable diversion.

 "…provide entertainment through short videos. These sites are partially beneficial to him because he enjoys reading up on new things on Reddit".

Only one parent was unhappy with their child's online activity, stating:

 "I see them watch a lot of movies and K-dramas on Netflix and they like watching movies very excessively to the point that it distracts them from important things. They can be a little problematic because they are now just wasting their time and doing useless things when they should be going outside to exercise and breathe fresh air".

From this statement it was clear that the parent felt her children's on-line and screen time activities were out of control, to the extent that they detracted from healthy outdoor pursuits and essential activities such as school work and household chores. In general, it was significant that the parents were not unduly concerned about the sites visited by their

children. In keeping with the staff and students' responses, they felt that the social function of these sites was of foremost importance. Just like the staff view of the top sites visited, parents also felt that they served an educational purpose. The only deviation from these views, was the student contribution, which emphasised relaxation and entertainment as a significant secondary consideration.

4.2.3 Theme Three: Motivation for Performing These Activities

4.2.3.1 Staff Responses

One staff participant felt that students' motivation for frequenting social media and entertainment sites, is to give them an escape from their everyday lives.
"*Fulfils a function of detaching for them. They don't have other ways of finding quiet space*" *(63 year old).*

Although there were two dissenting voices amongst the staff participants, the overwhelming consensus was that adolescents needed to socialise and belong to groups. This they were doing more and more via their smartphones. Adolescents are raised using smartphones and as Jobs (cited in Price 2017: para 7; Quinn 2017: para 4) so succinctly stated, this "revolutionary product [came] along [and changed] everything".

Staff participants in the sixty and above category, seemed to find this scenario more difficult to relate to. Their opinions were probably influenced by the fact that they had grown up in an era where they could disconnect or be inaccessible and they admitted to finding smartphones intrusive. They were also more judgmental of adolescent smartphone use probably because of their own historical context.
"The concept of paying attention has a different meaning to them… Eye contact has been lost, they need sound or an electronic buffer. They [are] distracted from their school responsibilities" (63 year old).

However, smartphones are "an engine of development" (de Bruijn, Brinkman & Nyamnjoh 2013). In the context of very trying times such as the Covid-19 pandemic, smartphones have liberated people from "traditional, geographical and locational" confines (Selyer, C. & Mugova 2017:1).

All the staff participants felt that adolescents did use smartphones as a means of gaining knowledge and educating themselves.

"They learn new information and knowledge; they learn new skills such as tracking their progress, editing and submitting work online and organisation."(36 year old).

4.2.3.2 Student Responses

Without a doubt the primary driver of students spending so much time on their smartphones is directly related to the social nature of humans and the ease of accessibility of these applications. As one student stated so clearly in the Focus Group discussion:

"Because we're social animals...hunters gather support. We've been trained to rely on phones".

When asked about how smartphone assisted the social aspects of lives, students said that it was a positive and useful tool.

"You can not only form new relationships with people you don't know, but you can also strengthen your existing relationships" (Grade 10 girl).

Students also mentioned how they found study support and easy assistance with projects online. In addition they accessed step-by-step tutorials on how to do things. Another reason why students were spending time on the indicated sites was, as stated supra, for the relief it brought them. To distract themselves from the discomfort of their environment or stressful demands of their lives. They chose to play games or watch videos unrelated to their physical context (Appendix F, G and H). This is no doubt propelled by the ease of access and specific "hooks" designed for these sites to deliver a dopamine dose or other reinforcing reward. Here above, both Vygotsky's theory of collaborative learning and the Uses and Gratification context are described.

At the closing of the discussion another student participant said:

"I wonder if there is anyone in the world that are able to forfeit the ability to use smartphones".

4.2.3.3 Parent Responses

Parent participants also felt that the motivation was predominantly a drive to socialise, but unlike some staff participants, they were satisfied with this means of social connection. One of the parents highlighted how her child finds validation.

"She expresses her artistry on Instagram and shares her passion with her followers"

Others explained how their children spent time with their friends, playing online games or chatting.

"Smartphones help them socialise with their peers and learn new hobbies and skills"
Another mother said:

"They get connected to the outer world, socialise, and also makes working easier sometimes".

To conclude, all participants were of the opinion that smartphones were essential for meeting the social needs of adolescents and had invaluable potential as a learning device. It was predominantly the student participants who acknowledged the enjoyment they derived from smartphone use and its recreational role in their lives.

4.2.4 Theme Four: Impacts of Time Spent on Smartphones.

4.2.4.1 Staff Responses

All the staff participants felt that smartphones were useful in terms of organisation, information acquisition, accessibility, learning skills and keeping track of school work. The following statements were made by some of them:

"…they can check email and instant messages so they are contactable. And they can set alarms". (63 year old),

"…access online platforms and educational websites" (60 year old).

"They learn new information and knowledge; they learn new skills such as tracking their progress, edit and submit work online and organisation with things like Google Calendar" (36 year old);

Nonetheless, this does not negate that three staff participants were predominantly negative towards smartphone use and expanded their views with much detail and

conviction. The major problem that was evident for staff members, was the distracting effect of smartphones. In fact, all the participants in the study, that is staff, students and parents, agreed that smart phones distract the students. The next concern for staff was the emotional effects that smartphone mediated communication and socialisation had on adolescents.

"there is online bullying and emotional abuse. I also think that they become socially and emotionally stunted" (36 year old).

This participant showed concern that the students are communicating through a medium which exposes them to emotional abuse and limits the way in which they interpret social cues and body language. She felt strongly that both their social and emotional development would therefore not progress ideally.

Another participant said:

"They become more vain and insecure as acceptance is usually tied up to the number of likes or followers they have" (38 year old).

The need for constant approval online is seen here as problematic since it inclines youngsters to narcissism and emotional vulnerability. Many of the students struggled with distorted perceptions of body image due to comparisons with others online and unkind criticism from their peers.

A further participant confirmed the concern about social and emotional development and how it would impact adolescents' future functioning, by stating:

"It retards social development, students do not learn the art of conversation, such as non-verbal cues, eye contact, tone and inflection. This missing skill can impede their promotion professionally" (46 year old).

The above statement ties in with the previous staff comments, in that it addresses the issue of adolescent communication which is mediated through an inanimate filter. It is this impersonal aspect of smartphones which exposes adolescents to emotional abuse and stunts social skill development. Being in this virtual space makes bullying easier, as the bullies are not corporeal and thus don't own the real effects of their hurtful comments. The lack of effective social skills would also make future team work and communication in the work place suffer.

Yet another participant reiterated these social and emotional concerns with this comment:
"Spreading of rumours and gossip. Becom[ing] less socially able in face-to-face situations (60 year old).

It became evident throughout the interviews that staff had more concerns about smartphone use than they had praise for the devices.

4.2.4.2 Parent Responses

The parent participants were more positive about smartphone impacts than the staff participants were. In the parents' view, smartphones help them *"socialise"*, be *"connected'* *"learn"* and "*working easier*". One parent stated that by taking photos and videos of activities, accomplishments, meals and journeys, this aided them in remaining engaged with their friends, networking with others and also helped them chronicle their lives.
"For now, it helps them connect with their friends during lockdown because connections are important in their future. They can also document what happens in their lives to have recorded memories in the future".

Nonetheless, they did voice concerns about the academic and developmental impacts of smartphones. Parents expressed concern about a decline in discipline and physical deterioration, yet only one parent raised the issue of peer pressure on social media sites. This is possibly due to parents' more intimate involvement in students' daily lives and therefore a more subjective and sympathetic view than that of staff participants.

4.2.4.3 Student Responses

Students felt that in general, smartphones had had more of a beneficial than a detrimental role in their lives. In terms of group work, completing certain assignments, communication about school work and appointments, and keeping track of posts by teachers on Google Classroom, smartphones had been a great help to them. Although, in terms of focus and achievement they felt that they had been hamstrung by their smartphones, which coincided with the other participant groups. Papert's theory of Constructionism, stating that learning is a reconstruction of knowledge rather than a transmission thereof, is shown in the manner in which adolescents use online data and resources to form their own

knowledge. Likewise, the ease of online collaboration supports Vygotsky's view of social learning within a specific context, albeit a cyber cultural community.

The following are their impressions of the benefits and drawbacks of smartphones:

A girl in Grade 11 said:

"It helps me with my academics sometimes but it also serves as a distraction and causes me to be less productive".

A boy in Grade 10 commented:

"It certainly drags the schedule behind, but I can always manage to finish work on time, so not that big of a factor".

Another Grade 11 girl had this to say:

"My phone has made doing certain assignments easier. For example, making videos and posting pictures of written assignments are easy to do because of phones".

However, this Grade 12 girl felt that:

"It made it hard to focus on my work as I get easily distracted. I could have finished my work faster if I didn't have my phone with me".

Unlike the staff participants, the student participants did not feel that the negative aspects of smartphone use were as detrimental. They acknowledged the distraction potential and the "addictive" elements of smartphones, but mentioned that they felt empowered by their smartphones and found them a very useful tool for their lives, as quoted below.

"Having access to any information regarding anything" (Grade 11 girl and two boys in Grade 10).

"Being contactable or able to contact someone when I'm in trouble" (girl Grade 10.)

The student participant group was the only study contributor which addressed the calming and soothing elements of smartphone possession and use.

Two boys (Grade 9 and 10) described passing time on their smartphones:

"It makes me feel less empty" and *"Escaping from reality… I feel as if I do not have any concerns or worry".*

While a Grade 11 girl said, *"When you're on social media, you don't have to think about the stress you have in your real life and you can mindlessly scroll through social media, you get a chance to ignore your stressful responsibilities".*

This seems significant in the context of major stressors during the academic and emotional transition for adolescents into adulthood (Csikszentmihalyi 2018) and the benefits of non-substance stress relief.

The responses of participants seemed to collect into themes in each of the three participant groups. The staff participants were more objective and critical of smartphone impacts; the parents were more tolerant of the unfavourable aspects of smartphones and the student participants, although aware and often prepared for the negative repercussions of smartphone use, added a layer to the other two participant groups' perceptions, in that they described an element of enjoyment associated with smartphone use.

4.3. Rigor and Trustworthiness in the Data Analysis and in the Findings

As Burnard (1991;465) says, "One of the difficulties in this sort of work is always going to be finding a method of presenting findings in an honest and reliable way".
Every effort was made to set participants at ease by building a rapport with them. This is essential for generating mutual respect and truthful, rich data. Simultaneously, ethical rigor was maintained (Guillemin & Heggen 2009) and the utmost care was to taken to represent their contributions verbatim (Slevin 2002). To this purpose, illustrative quotes were chosen to support conclusions and reasoning. When there was ambiguity or a need to clarify words and meanings, participants were contacted by email and asked in detail what the meaning of their response was until this was clarified (Meho 2006). This sometimes required several email exchanges. Triangulation, gaining the insights of staff, parents and students through a variety of methods, was used to evaluate the appropriateness of deductions made from the data (de Bruin 2010). The results of this study could be transferred to similar settings or contexts and circumstances and the result would be comparable (Shenton 2004), even though this is a unique case.
Personal bias was thoroughly addressed (Crossman 2020), since the initial position and expectations of the researcher changed diametrically through the analysis of the data, which may originally have influenced findings. Sampling biases could have arisen because only mothers volunteered as parent participants, and in Burmese society are seen to be more permissive than fathers. With regard to the staff contingent at the High School, they tended to be more experienced, and therefore older. This could have made them less up to date with smartphone trends and student needs. These issues could lead to unreliable results (Marsden 2013) if not taken into consideration. Student participants had the

opportunity to edit and comment on the focus group discussion transcript and add additional information at their leisure (McMillan & Schumacher 2010). These multi-method strategies were implemented to increased trustworthiness of the data.

4.4 Discussion and Summary of Findings

4.4.1 Discussion

Adolescents are addicted to their smartphones because of the easy access to applications linked to these devices. Because of their developing social identity and their need to be accepted and to belong, adolescents are impelled to return to sites which have rewarded them with these feelings. This was borne out by the findings, which were consolidated under four main themes. These themes focused on the following:

4.4.2 Summary of Findings

Theme One: Amount of time spent on smartphones. This theme explored the amount of time adolescents spent on smartphones, regardless of the activities pursued and whether the role players perceived this amount of time to be optimal or excessive. From interviews with staff participants, focus group discussions with students and email questionnaires completed by parents, it became apparent that all role players perceived time spent on smartphones to be excessive. An estimate of the total time spent primarily on these devices, was gauged at an approximate minimum of 4.5 hours after school. This would indicate constant use at home while doing other tasks. The consequences of using smartphones so continuously are definitely problematic

Theme Two: Activities pursued when using smartphones. In this theme specific attention was given to the sites visited and activities pursued on these sites. An evaluation was made of which were the top three sites and activities pursued. These were in order; Facebook Messenger, YouTube and Instagram. All of these sites have social connection as their primary driver. Many students themselves are avid contributors to YouTube.

Theme Three: Motivation for performing these activities. Here the motivation driving adolescents to visit and use certain applications and sites identified in theme two, were explored. As is obvious form the self-reported data above, all the sites that absorb most of the adolescent's time are those which reinforce a sense of group belonging. The

adolescents find isolation and loneliness unpleasant and alleviate this feeling with online activities which make them feel less alone and more connected and validated.

Theme Four: Impacts of time spent on smartphones. Finally the impacts of all the time spent on smartphones and the activities pursued during this time, were examined. An evaluation of the impacts of both the length of time and the type of activities was formed by all the role players and contributed. The negative impacts were that smartphones were seductively effective distractors and time wasters. They also created easy, instant opportunities for self-judgment and unfavourable assessment of the adolescents' lives. Smartphones inadvertently hijacked attention and activity, tending to make adolescents more sedentary. They also opened access to unwanted material and bullying. The positive impacts of smartphones, were that they were an invaluable tool in terms of access to information and making adolescents more accessible. The social function of smartphones can also not be minimised, playing an important function in identity formation and emotional health for most adolescents. Although smartphones are a very useful and by now almost a necessary tool, the developers of the applications which make smartphones addictive, have in many cases not foreseen the negative outcomes of the instant gratification these programs deliver.

4.5 Chapter Summary

The primary function of this chapter was to unveil and discuss the findings of the research study and to analyse the data. Overall, the findings showed a concurrence between the respondents and were in line with the literature reviewed. The subsequent chapter will contemplate the conclusions which can be drawn from the research, and what the limitations of the study are. Furthermore, recommendations for future research are suggested.

EXPLORING ADOLESCENT SMART PHONE DEPENDENCE

Chapter 5: Conclusions, Limitations and Recommendations

5.1 Introduction

The previous chapter presented the findings from the data collected via face-to-face interviews, observations, face-to-face and synchronous virtual focus group discussions and e-mail questionnaires (Meho 2006). The findings of this study are discussed in the light of the literature reviewed in Chapter 2 (Burnard 1991). The contextual circumstances of the participants were included to provide feasible explanations for the findings (Catanzaro 1988; Corbin & Strauss 2008). This chapter will give and overview of the study and review the summary of findings with regard to the research objectives. Thereafter considerations impacting the interpretation of the research findings and conclusions drawn from data will be addressed in terms of the limitations of the study. Finally recommendations will be made.

5.2 Overview of the Study

The research project evolved from concerns expressed in several parent-teacher conferences and class observations in schools I taught in Turkey, in Malawi and in Myanmar. These concerns were about the students' failure to regulate their smartphone use. Literature revealed that there is a growing concern worldwide about the dependence of adolescents on smartphones, since this has been affecting students' academic and social development, amongst many others. It also became obvious that the area of adolescents' smartphone dependence is scantly researched in developing countries such as Myanmar. There were calls for intensive investigation into these concerns. Hence a study with an aim to explore smartphone dependence among adolescents in a private international high school in Myanmar was conceived.

The study was a qualitative single case study which utilised interviews, observations, focus group discussions and questionnaires to collect data from various stake holders in a selected school in Myanmar.

5.2.1 Restatement of Research Aim

Since the aim of the study was to explore smartphone dependence among adolescents in a private international high school in Myanmar, this was expected to uncover the level of use, whether this use was considered problematic and thereafter, what the impacts, consequences and implications were. This would culminate with recommendations being made about smartphone use in this setting.

The study was guided by the four main research questions:

1. What is the level of use of smartphones by adolescents at a private school in Myanmar?
2. Is the level of smartphone use among the adolescent considered problematic by the school stakeholders (students, parents and teaching staff)?
3. What are the implications and consequences of smartphone use by the adolescents in the school?
4. What recommendations can be made about the use of smartphone by adolescents in the school?

The research questions were answered through a thorough literature review and through the data collected by way of a triangulated method, incorporating individual face-to-face interviews, observations, face-to-face and virtual synchronous focus group discussions, e-mail questionnaires and document analysis.

5.2.2 Summary of Findings

I summarise the findings per research question below.

1. What is the level of use of smartphones by adolescents at a private school in Myanmar?
The study found that the level of smartphone use by adolescents was "high" relative to the expectations of all the stakeholders. Members of staff, parents and the students themselves admitted that students used smartphones more than what is good for them. The issue of dependence on smartphones among students was demonstrated, as was defined in Chapter 2, where dependence was identified as the state of relying on or being controlled by something or someone else (Foddy & Savulescu 2014). This was shown by students' compulsive use of smartphones in order to avoid feelings of discomfort resulting from not using them (Alavi et al 2012; Potenza 2006). The rewards which adolescents in the study admitted to getting from smartphone use, made it more difficult for them to desist

from use. This created a conflict between the "easy" rewards of smartphone use and the rewards of attaining good grades and being in harmony with their parents.

The emotional manifestations of problematic internet use were also seen amongst students. These included feelings of guilt or defensiveness about time spent on-line via smartphone, as well as boredom with routine tasks, procrastination and occasionally an inability to prioritise in order to meet demands and schedules (Gregory 2019). Although the median estimate of smartphone use made by all role players in the study was 5 hours, this is lower than the global average of more than 6.5 hours (Kemp 2019). However, we must bear in mind that this is the time spent on smart phones the student had access to other devices like the laptops they use at school for learning.

2. Is the level of smartphone use among the adolescent considered problematic by the school stakeholders (students, parents, teachers and administrative staff)?

Yes, the stakeholders found the level of smartphone use to be problematic, however there were subtle differences in how the different participant groups perceived the seriousness of the problem. For example, school staff found smartphones to be more intrusive and less helpful, with the staff proponents for smartphone use wanting to compromise by accommodating adolescents' tendency to reach for the devices. Students themselves assessed smartphones as problematic, but did not want to be parted from them, stating a desire not to be disenfranchised. Parents were roughly on middle ground between these two views, desiring their children's happiness and yet wanting this to include good academic performance, an acceptable level of physical activity and an alleviation of eye strain. The students felt that they were in control of the level of smartphone use while simultaneously acknowledging that is was problematic. This confirms concerns from Sinek (2017), Newport (2016), Stone (2009) and O'Neil (2016) who see adolescents as "blissfully unaware of and unconcerned" about the imminent and future consequences of their smartphone use. Adolescents are in a transitional stage of life, moving from childhood to adulthood (Csikszentmihalyi 2018) and this is marked by rapid and dynamic development, not by rational decision making and measured self-reflection. It is not reasonable to expect them to accurately assess potential threats, albeit future threats of a "cyber" nature and the projected consequences thereof.

Commercial enterprises in antithesis, overwhelmingly emphasise the benefits of smartphones as liberating people from "traditional geographical and locational" confines (Cullen & Kabanda 2018:1) and many others focus more on mobile connectivity as "an engine of development" (de Bruijn, Brinkman & Nyamnjoh 2013) than tempering it with cautions for concern.

3. What are the implications and consequences of smartphone use by the adolescents in the school?

The major concern voiced by staff, parents, and students, was the distracting influence of smartphones. This translates into loss of time and motivation for more arduous seeming tasks. Newport (2016) is very outspoken about distraction and advocates for single-minded "deep focus". Further to this, the finding show adolescents' strong abhorrence of being separated from their smartphones underscores Dilts' (2018) observation, that adolescents nowadays have a habitual expectation of connectivity.

Student participants did not report as many negative consequences as were seen in developed countries (OECD 2015:4), but this may be due to a "time lag" between the manifestation of problems in developed and developing countries. By this I mean that it is merely a matter of time for these issues to become more obvious in Myanmar and that it would be astute to take pre-emptive action before this happens.

Similarly, there was an acknowledgement that ordinary face-to-face communication was disrupted by smartphones. Students had to challenge themselves to interact with each other in social settings, unmediated by their digital devices. As Theodisiou (2018) says, "Self-regulation has failed and legislation needs to be introduced". This suggestion is helpful but will still need to be implemented in the home primarily, before it is reinforced elsewhere.

5.2.3 Recommendation on Smartphone Use for Adolescents at the School

4. What recommendations can be made about the use of smartphone by adolescents in the school?

Based on the findings, I make the following recommendations:

Adolescents' use of smartphones should be limited. "As school and home are the two main areas of a young person's life, these two environments in particular should be ones in which pathological internet usage by adolescent users is tackled" (Rębısz and Sikora 2016:202).

Teachers should ensure a "no smartphone" environment at school, because smartphones are not a necessity for teaching and learning, and if parents are unable to set limits on students' smartphone use, at least this can be reduced by limiting the use of these devices at school. Schools could implement a policy which holds students' smartphones in safekeeping for the duration of the school day; that is from when they arrive until when they leave, if they insist on bringing them to school.

There is a need to study how best parents can be equipped to moderate their children's smartphone use in the home. This would require parents' involvement in parenting workshops which would educate them on building routines and family traditions which limit smartphone use and substitute this with other activities. Parents would need to be made aware of the future consequences on their children's health, education and development due to excessive smartphone use. Parents should create limits such as not sleeping with the smartphone in the bedroom, not having a meal where the smartphone is on the table or next to them and making a habit of switching smartphones off or to "airplane mode" at least half an hour before bedtime.

Educational institutions should be mandated to scaffold traditional, technology heavy education with real-life skills and concrete activities. This type of further study is required to develop intervention strategies and forms of decisive action to assist both parents and educators in improving current smartphone habits in adolescents. These studies should suggest, develop and pilot programmes to capacitate adolescents, parents and educators. In so doing they will be provided with the knowledge and the tools to lead richer, more varied lives.

Even so, this is somewhat like closing the stable door after the horse has bolted. More importantly, parents should be educated and equipped to manage their children's technology use from a very young age. Smartphone time should be seen in conjunction with all other on-screen time, as the parents seem to do. Therefore, the school should also try and limit screen time in the schools by allowing learners to do more book and paper-based activities.

In addition, non-screen activities such as those advocated by Common Sense Media (2017) and Pickhardt (2012) should be encouraged. These are more hands-on activities such as helping at Senior Citizens' Homes, visiting the terminally ill, making food packages for the homeless, donating unused items to charities, making crafts with and reading to children in children's homes, collecting litter, recycling, making bird boxes for birds and bird-watching, grooming horses, helping at animal shelters, growing fruit and vegetables in a pot garden, helping neighbours, and/or going camping or hiking, to mention a few (Common Sense Media 2017). Pickhardt (2012:8:27) has three main suggestions, "take the child outside to take back the active pleasures of the outdoor life and connecting with the wonders of the natural world. Therefore the school should also try and limit screen in the schools by allowing learners to use more book and paper based activities.

5.2.4 Strengths of the Study

The strength of the study is that it contributed to the paucity of literature on the topic of smartphone dependence among adolescents in a developing economy such as Myanmar. An awareness of the problematic impacts of smartphones amongst adolescents in this culture was revealed, and suggestions to address these negative consequences were made. Rather than generalisability, this study used relatability in order to address the specific elements of the study in more depth (Dzakiria 2012).

5.3. Limitations of the Study

5.3.1. Limited Time Available for Research

The research was carried out as part of my Masters studies in Comparative Education with UNISA (The University of South Africa). It therefore suffered the limitations of time and resources. The time available for research had the result that there were considerable time restraints and pressure to meet deadlines. In the school where the study was conducted, all the participants had a very full schedule of extra-curricular activities and expected academic targets. This applied to me as the researcher as well. This resulted in there being a limited amount of free time to conduct research.

5.3.2 COVID-19 Restrictions

At the proposal stage of this study, the intention was to conduct face-to-face interviews with parents. Due to the COVID-19 pandemic, these interviews had to be converted into e-mail questionnaires. All the questions and their format remained the same, therefore not altering the essence of the research. It is possible that I might have obtained more data through interviews than via questionnaires, however because of the low English proficiency amongst the majority of the parent respondents, they had to work with their children, which put them more at ease and made them less self-conscious (Kim et.al 2003; Murray & Harrison 2004). The time flexibility of e-mail responses was also ideal for the "lockdown" situation.

5.3.3 Patriarchal Relations

Another limitation to consider, was that only female parents responded to the questionnaires. This is probably because Myanmar espouses a somewhat patriarchal approach to society, meaning that men hold more power and their roles are considered more important (Napikoski 2020). Male respondents possibly would have had a much firmer reaction to excessive smartphone use or would have responded from quite a different perspective.

5.4 Recommendations

5.4.1 General Recommendations

Many countries have promulgated legislation with similar effects, the first being South Korea, which managed to pass the "Cinderella Law" in 2011, shutting down online video gaming for children under 16 between 00h00 (midnight) and 6h00 (in the morning) (Sang, Park & Seo 2017). Taiwan also passed legislation which imposed heavy fines on parents for not properly managing their children's electronic device use, in 2015 (Malm 2015) and France followed suit in 2018, banning smartphones, tablets and smartwatches in schools (Baker 2018).

Stricter regulatory legislation should be imposed on smartphone application creators, so that they demonstrate adequate concern for the welfare of children rather than for the economic advantage of their products (Girish 2020). These regulations should include, but not be limited to pop-up notifications alerting users of the amount of time spent online, shut-off alarms which stop an application after an allotted time period pre-set by a user (Cramer 2017).

5.4.2 Recommendations for Future Research.

There is a need to study how best parents can be equipped to moderate their children's smartphone use in the home. This would probably require parents' involvement in parenting workshops which would educate them on building routines and family traditions which limit smartphone use and substitute this with other activities. Parents would need to be made aware of the future consequences on their children's health, education and development due to excessive smartphone use. This study could be used as an inceptive stimulus for developing ways to ameliorate smartphone use and to enhance adolescent and family well-being. Additional focus group discussions, including those with adult participants, and a prolonged research period could be employed in future studies to augment both the data and the research findings. Tam & Walter (2013:536) suggest that the mental health aspect of this study topic "will need to be joined by ideas from education, the social sciences, philosophy, and political domains".

5.5 Conclusions and Discussion

Adolescents at the site school are assuredly dependent on their smartphones and this use can be classed as problematic and at times excessive (Foddy & Savulescu 2014). The motivation for this dependence is primarily their need for social connection, much like the rest of humanity, and the easy reward of a dopamine fix (Sinek 2017) or distraction from their daily stressors. This distraction had an extension into their daily lives, specifically with regard to an interference with school work and family responsibilities. On top of this, the negative health impacts of being more sedentary and issues with deteriorating eyesight were the foremost complaints amongst both parents and students. Staff participants noticed a reduction in real life social skills and interaction, as well as skewed values in terms of validation. In general this body of adolescents is culturally and circumstantially conditioned to be conscientious and respectful. Therefore deviance from performing their academic duty and not paying heed to their elders would be considered unacceptable. This contextual factor helps ameliorate a potentially greater negative influence of smartphone dependence. Issues such as cyber bullying did occur, but this could not be directly attributed to smartphone dependence. The same held true for the changes in the eye health of these adolescents. It could not be categorically deduced that the smartphone dependence alone caused the eye deterioration. Further research would be required to link specific negative consequences of smartphone use to this adolescent group. These findings were appreciably consistent with previous studies on smartphone dependence.

5.6 Chapter Summary

This qualitative case study was aimed at exploring smartphone dependence in adolescents in a private school in Myanmar. The conclusions were based on the data collected and an extensive related literature review. Triangulated research methods, using face-to-face interviews, focus group discussions, questionnaires, observations and document analysis, facilitated the collection of data from three sources, namely students, parents and educational staff. The results showed that the level of smartphone use was considered excessive by the stake-holders. The adolescent at the school could be considered dependent on smartphones. Limitations of time, resources, patriarchal relations and the COVID-19 pandemic context were acknowledged. These findings should be understood with the caveat of not being representative of all adolescents in all schools or societies. The study made several recommendations which included training of parents

and educators in terms of an awareness of future outcomes of smartphone dependence and skills building to assist the role players to incorporate additional activities and a mindful lifestyle. Finally, this study could be used as the basis for developing ways to ameliorate smartphone use and enhance adolescent and family well-being. Additional focus group discussions, including those with adult participants, and a prolonged research period could be employed in future studies to augment both the data and the research findings.

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7. APPENDICES

APPENDIX A

UNISA | university of south africa

UNISA COLLEGE OF EDUCATION ETHICS REVIEW COMMITTEE

Date: 2019/11/13

Ref: **2019/11/16/6548857/23/AM**

Name: Ms JA Clarke-McLeod

Dear Ms JA Clarke-McLeod

Student No.: 6548857

Decision: Approved

Researcher(s): Name: Ms JA Clarke-McLeod
E-mail address: jmcleod.sev@gmail.com
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Supervisor(s): Name: Dr Zenzele L Weda
E-mail address: zenweda@gmail.com
Telephone: +27 71 529 1406

Title of research:

EXPLORING ADOLESCENT SMART PHONE DEPENDENCE. THE CASE OF AN INTERNATIONAL HIGH SCHOOL IN MYANMAR.

Qualification: MEd in Educational Foundations

APPENDIX B

MRS S LAING
Department of Economics
University of Pretoria
Brooklyn

Tel: (012) 420-3453
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24 November 2020

TO WHOM IT MAY CONCERN

Confirmation of text editing master's thesis

I herewith confirm that in my capacity as text editor at the Department of Economics at University of Pretoria and at the SA Journal of Economic and Management Sciences, I have proof read the dissertation **Exploring Adolescent Smartphone Dependence. The Case of an International High School in Myanmar** by JA Clarke-McLeod.
I found it flowing and easy to read, naturally incorporating all the aspects relating to academic writing.

Yours sincerely

Sonja Laing
Department of Economics
University of Pretoria

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APPENDIX C

	HEAD	COUNSELLOR	TEACHER	PARENT
T I M E	5. In your opinion how should the students spend their time on the smartphones? Do you consider the level of smartphone use among the students optimal or problematic? Please explain.	2. In your opinion how many hours per day does each student spend on their smartphone at school? 4. In your opinion how should the students spend their time on the smartphones?	1. In your opinion how many hours per day does each student spend on their smartphone at school? i Do you think this is too much? Too little? Please explain? ii What is an optimum amount of time that students should spend on their smart phone? iii What would happen if they spent more? 7. Do you consider the level of smartphone use among the students problematic or optimal? Please explain.	1. In your opinion how many hours per day does your child spend on their smartphone at home? a. Do you think this is too much? Too little? Please explain? b. What is an optimum amount of time your child should spend on their smart phone? c. What would happen if they spent more? d. Do you consider the level of smartphone use by your child problematic or optimal? Please explain.
A C T I V I T Y & M O T	4. Are there sites which the students frequent which are considered problematic by the school? i Why do you think they do so? ii Why are these sites considered problematic?	4. What sites do students enjoy spending time on? Why do they do so? Are the sites problematic or beneficial to the students?	3. What sites do student enjoy spending time on? Why do they do so? i Are the sites problematic or beneficial to the students? ii In your opinion how should the students spend their time on the smartphones? 4. Which three smartphone applications have you observed to be used most? (Please state the three options here?)	3. What sites does your child enjoy spending time on? Why do they enjoy spending time on these sites? Are the sites problematic or beneficial to your child? 5. Which three smartphone applications have you observed to be used most? (Please mention the 3 of them here).

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I M P A C T	1. In your opinion what are the main ii. challenges experienced with student smartphone use at school? i. advantages of student smartphone use within the school?	1. What are the main issues that you have had to deal with concerning student smartphone use, (both in and out of school)?		
M O T I V E		6. How do the students react when their smartphones are withdrawn from them? Please share your opinion about why this is so.	2. How do the students react when their smartphones are withdrawn from them? Why do you think they react in such a manner?	2. How does your child react when their smartphone is withdrawn from them? Why do you think they react in such a manner?
I M P A C T	6. What are the positive impacts of smartphone use by the students from the school? 7. What are the negative consequences of smartphone use by the adolescents in the school? Is there an impact on student academic, social, physical and intellectual development? 8. How has the smartphone use by students impacted on the school discipline and ethical behavior?	7. What are the positive impacts of smartphone use by the students at school? Please explain further. 3. Do you consider the level of smartphone use among the students problematic or optimal? Please explain. 8. Can you identify negative consequences of smartphone use by the adolescents in the school, albeit on student academic, social, physical or intellectual development or school discipline and ethos?	5. What are the positive impacts of smartphone use by the students from school? 6. What are the negative consequences of smartphone use by the adolescents in the school, albeit on student academic, social, physical and intellectual development or school discipline or ethos?	4. In your opinion how should children spend their time on smartphones? 6. What are the positive impacts of smartphone use by adolescent children? 7. What are the negative consequences of smartphone use by the adolescents? Do you think it affects their academic, social, physical and intellectual development and cause discipline issues? Please explain.
	2. What policies has the school promulgated to regulate smartphone use?	10. Explain how you feel about how smartphone use is regulated within the school.	9. Does the school have any written or unwritten policy on the smartphone use within the school? If yes please explain	

	Please explain the policy and how it is enforced. If there is none, explain how smartphone use is regulated within the school? 3. Is there a national or provincial policy governing students' smartphone use in schools? If yes tell me about it. Is it effective in addressing smartphone use in your school?		the policy and how it is enforced. If no, explain how the smartphone use is regulated within the school.	
		5. Do you observe dependent or "addictive" behaviour in the students with regards to their smartphones use? Please explain.		9. How much data does your child use monthly? You can estimate it in monetary terms or in megabytes.
	9. How often are smartphone phones discussed in school meetings? (What issues have been raised?)	9. How often are smart phones discussed in school meetings? (What issues have been raised by teachers, parents, students or others?).	8. How often are smartphones discussed in school meetings? (What issues have been raised?).	8. Have parents raised issues in school meetings about possession or use of smartphones by students? What issues have they raised and how have they been dealt with?
	10. What recommendations could be made about the smartphone use by the students at the school?	11. What recommendations would you make about the smartphone use of the students and the school?	11. What recommendations would you make about the smartphone use of students at ISM?	11. What recommendations would you make about the smartphone use by adolescents in general?
			10. What activities are the students involved in that do not require students	10. What activities that do not require your child to go online or to use

		to go online or use their smartphones? Do the students enjoy these activities?	their smartphones does your child do? Do they enjoy these activities?
11. Is there anything that you would like to say regarding things that we have been discussing?	12. Is there anything that you would like to say regarding things that we have been discussing?	12. Is there anything that you would like to say regarding things that we have been discussing?	12. Is there anything that you would like to say regarding things that we have been discussing?
12. Do you have any questions regarding our subject of discussion?	13. Do you have any questions regarding our subject of discussion?	13. Do you have any questions regarding our subject of discussion?	13. Do you have any questions regarding our subject of discussion?

APPENDIX D

Staff - Principal Counsellor	J	K
1. In your opinion what are the main ii. **challenges** experienced with student smartphone use at school? i. **advantages** of student smartphone use within the school?	Abusing the privilege of being allowed to use smart phones at school. Mainly by being on social media and posting or watching inappropriate content. Access to online platforms and educational websites.	Distraction in classes. This is undocumented because advisory period was removed. They do text during a counselling session or go on social media. They have done things like hacking (gaining unlawful access to sites and data). Use WhatsApp Viber to talk about each other. Privacy. what specifically are they distracted by? Is it notifications, social networking, just the "release" or "hit" of checking up on something that's always available and always "attentive" or rewarding in some way? social pressures, they are marginalized and mocked or shamed and bullied. would you say that it's online bullying or misrepresentations of perfect lives online or a need to have the latest gadget or to constantly display your life and activities self-esteem issues, YouTube and Instagram contribute to these things. Social media is a huge thing and the importance for acceptance this is probably informed by "perfect lives" above and constant comparison with others' pseudo lives online lack of communication skills do you mean the WAY they communicate or a lack of conception of what the appropriate social conventions are or what exactly are they lacking? How are they communicating? NOT GRASPING - SHORT HAND FOR EVERTHING (TEXT). LINEAR&DIGITAL, MISS CULTURAL CUES, NO EYE CONTACT, SOCIAL AND PUBLIC BEHAVIOUR. NOT SHOWY – not trying to keep up with status. UNREAL

		EXPECTATIONS/PERFECT they want to be perfect. ISOLATION AND DEPRESSION – feeling they don't fit or aren't as good
6. What are the **positive** impacts of smartphone use by the students from the school? 7. What are the **negative** consequences of smartphone use by the adolescents in the school? Is there an impact on student academic, social, physical and intellectual development? 8. How has the smartphone use by students impacted on the school discipline and ethical behavior? Do you consider the level of smartphone use among the students optimal or problematic? Please explain.	6. None. A laptop meets all their needs. 7. Lack of focus. Inattentiveness. Spreading of rumours and gossip. Yes. Academics suffer if not used appropriately also vocab. and writing becomes stilted lol btw etc. Become less socially able in face to face situations. I read that all long-term mobile users get a stooped posture from constantly looking down at their phone and poor eye sight from tiny screen. Intellectually stunted. 8. Negatively. Another layer of rules and regulations required and rules to be broken. Problematic. For all the reasons listed above.	6. It can be used as a teaching tool and aid to students, see number 3. Integration in lessons. Calendar Assignments Alarms 3. We need to embrace technology and integrate smart phone use within the classroom, make it a teaching aid. When I do time management skills will students, I show them how to use the calendar, note and alarm functions in their phone to help them manage their time. Personally believe it's not problematic range of use where they depend on it chronically and it distracts them. Rather a useful tool. 8. It retards social development, students do not learn the art of conversation, such as non-verbal cues, eye contact, tone and inflection. This missing skill can impede their promotion professionally. From a self-esteem perspective there is a dependence on "likes" and opinions of others for validity and acceptance. Over use definitely does lead to academic issues.
5. In your opinion how should the students spend their time on the smartphones?	Researching. Accessing apps when teacher instructs them to do so.	I do not think they are on it continually all day, but they definitely "sneak" glances at it during classes and are on it during the breaks. There are 4 boys who sit in the lobby and play videogames on their phones before school, during breaks and after school. I think they are in grade 9. They might be good students to interview. As long as the school is open on private social media (Viber WhatsApp) talk about everything.
4. Are there sites which the students frequent which are considered problematic by the	Htet Lin can provide the list of sites that are blocked. • Adult and Pornography • Gambling	tic tok, facebook, snapchat, (Viber Instagram) A lot of video posting. Good and bad. Can be motivating.

	• Games (except some educational games websites) • Malware Sites • Nudity • Proxy Avoidance and Anonymizers • SPAM URLs • Violence Plus, the following categories were added to the blocked list only for students • Cheating (Academic) • Hacking • Music • Peer to Peer • Social Networking • Streaming Media (except Youtube) i. Messaging friends, social media obsession. ii. Distract from schoolwork. Encourage inattentiveness. iii. Blocked on school wifi. If caught accessing through sim consequences on pg 21 of handbook.	Use it as a learning; as an educational and social aid.
2. What policies has the school promulgated to regulate smartphone use? Please explain the policy and how it is enforced. If there is none, explain how smartphone use is regulated within the school?	See pg 39 of handbook. (Appx 7) See pg 21 of handbook. (Appx 7)	I have never taken a student's phone from them. Parents are contacted and an email record is kept. Parents are also so addicted or dependent.
3. Is there a national or provincial policy governing students' smartphone use in schools? If yes tell me about it. Is it effective in addressing smartphone use in your school?	No	There is no regulation here. Students are allowed to have their phones, but they cannot be used during examinations.

9. How often are smartphone phones discussed in school meetings? (What issues have been raised?)	Rarely. It has become accepted by teachers and administrators as a part of 21 Century education and daily life.	Yes there is definitely addictive behavior. Always have their phones with them and "need" them.
10. What recommendations could be made about the smartphone use by the students at the school?	Ban them entirely. It has had a measure of success at other schools globally.	I don't have an answer for that
11. Is there anything that you would like to say regarding things that we have been discussing?	It is not too late to redress the harm done but I feel educators need to agree upon common policy as a school that acts independently would undoubtedly face push back form stakeholders.	Educators need to embrace it and utilize it as a learning tool.
12. Do you have any questions regarding our subject of discussion?	Can you fix this quandary?	I think it would be better if we sit and talk more in depth. I have been interrupted by students every time I attempted to do this. Let me know a time when you are free and I can block of some time to discuss further.
		Parents need to implement a policy to monitor and train their children to integrate media into a full life. It can't be used as a teaching aid only but the misuse does lead to academic issues and the mothers are very permissive and don't give any real guidance.

APPENDIX E

Appx E Staff	*San*	*Rod*	*Rin*
1. In your opinion how many hours per day does each student spend on their smartphone at school? i Do you think this is too much? Too little? Please explain? ii What is an optimum amount of time that students should spend on their smart phone? iii What would happen if they spent more? 7. Do you consider the level of smartphone use among the students problematic or optimal? Please explain.	4 hours Too much. I think it's because they've grown up with this and don't know how to function apart or be disconnected. We see it as an intrusion they see it AS personal space. Fulfills a function of detaching for them. They don't have other ways of finding quiet space – no tools for being still or quiet. Only feel happy comfortable when experiencing stimulus and sound. Input. Talk all the time. Lose value in the class meetings of empty space. Concept of paying attention has a different meaning to them. Eye contact has been lost, need sound or electronic buffer. Validated by noise. If they have noise they're valued. No action - don't understand on alert causes anxiety doing this or dealing with. I have to say I can be sucked in just as easily. There's a sense of anxiety and validation and connection it's NOT available for connection create space and distance between you and the speaker Only way we can alter to develop and	4 hours but in my opinion it's too much. They spend a lot of time gaming or watching others gaming or playing a sport. They should rather really interact. They should be reading outside. They would become more dependent and lose skills such as how to use a dictionary and how to find things external to online sites.	4 hours - It's enough to meet their needs Too much. (Social and entertainment). 2 hours They lacked focus and could not follow simple instructions.

	etiquette that used to have phones in baskets parents are worst offenders. Apron strings or umbilicus. No matter how many times schools try to cut this more and more disconnected from their kids. Drowning in email or tech. Not common to use email rather phone call also phone or text. Phu Pwint Facebook but no website instant messenger. Can't understand English ii What is an optimum amount of time that students should spend on their smart phone? 1 hour - before school, and check phone at lunch break after tutorial PROBABLY AFTER SCHOOL IF THEY'RE WAITING? emergency iii What would happen if they spent more? They would be distracted from their school responsibilities. The level of maturity is lacking.		
<mark>3. What sites do student enjoy spending time on? Why do they do so?</mark> <mark>i Are the sites problematic or beneficial to the students?</mark> <mark>ii In your opinion how should the students spend their</mark>	Social media - yes don't know how to talk to people about issues. Small talk hoe to ask show interest in others. Stand and throw out prompts noticing details and read the room Can they read emotions Don't take the time to feel. They are anxious about "Missing Out" on	YouTube – online shopping – sports sites. I think they do this because they are generally interested on one hand and it also provides them with escapism because it's not real. Some of them just surf stuff randomly.	Reddit, Instagram, Messenger i. Not at all beneficial ii They should be using their phones doing research. 4. 1. Instagram, 2. Messenger, 3. Reddit

time on the smartphones? **4.** Which three smartphone applications have you observed to be used most? (Please state the three options here?)	information and not being "connected" i Are the sites problematic or beneficial to the students? They are both. Problematic because it keeps them from their studies and is distracting, and beneficial because even the school emails them messages! ii In your opinion how should the students spend their time on the smartphones? Only checking email and instant messages Facebook, Twitter, SnapChat	i Although there is some benefit from an educational point of view, there is too much stimulus and it is constant. ii Educational sites, reputable research sites and supplemental educational sites and for communication. Instagram, Snapchat, Viber.	
5. What are the **positive** impacts of smartphone use by the students from school? **6.** What are the **negative** consequences of smartphone use by the adolescents in the school, albeit on student academic, social, physical and intellectual development or school discipline or ethos?	They can check email and instant messages so they are contactable. And they can set alarms. It makes them somewhat accessible. They are connected and can't take care of business! All Focus is fragmented, repeatedly, all day long.	They learn new information and knowledge; they learn new skills such as tracking their progress, editing and submitting work online and organization with things like Google Calendar. Also some games help them learn how to think. Strategy or Tactical Role Playing Games in particular are good to develop these skills, such as Vikings, the Banner Saga or Game of Thrones. Minecraft can also teach them how to construct virtual spaces and abstract realities.	They gain more access to information making their research sometimes well-informed. They become more vain and insecure as acceptance is usually tied up to the number of likes or followers they have. They also have difficulty managing their time as they end up spending more time online than what they originally planned. Sometimes, they copy what they see online without giving credit to the author.

		The smartphone is a major distractor and it is misused. By this I mean there is online bullying and emotional abuse. I also think that they become socially and emotionally stunted. They become sedentary and their eyesight seems affected, back and neck problems, also some complain of carpal tunnel syndrome from texting so much. They are exposed to a lot of fake news and are not equipped to identify what is real. Also their ability to focus and learn could be hampered by having everything instantly and easily accessible all the time.	
2. How do the students react when their smartphones are withdrawn from them? Why do you think they react in such a manner?	They are NOT happy! Eye rolling slumping stomping hitting the wall. We fel disappointed they feel motioning example role model they're very skilled at disception Why do you think they react in such a manner? Because we have become a society of instant communication and instant gratification. Status Ear buds message without words PERHAPS FEEL DISEMPOWERED OR	They really are not a big fan of it. There will be a quick initial no. Sense of privilege and entitlement. It's not like they're hurling abuse at anyone, it's just a response of "don't disrespect my stuff! Who are you to take my phone? It's mine".	They feel embarrassed because they are caught for not paying attention.

	"NAKED" WITHOUT IT?		
9. Does the school have any written or unwritten policy on the smartphone use within the school? If yes please explain the policy and how it is enforced. If no, explain how the smartphone use is regulated within the school.	I don't know.	Rules are available for the parents and students in the Student handbook. Class rules and norms are set as per class teacher. This can include taking the phone away and is supposed to be enforced by the teacher.	The school has a written policy. Please refer to ISM Technology Code of Conduct in the Parent and Student Handbook.
8. How often are smartphones discussed in school meetings? (What issues have been raised?).	I don't know. But, I know it is an issue, especially with social media.	Start the year with the smartphone policy in place but this is rarely raised.	We had an agreement set on the first day of school when it comes to the use of phone.
11. What recommendations would you make about the smartphone use of students at ISM?	You can have it out before school, during your lunch and after school only.	Students should generally as a rule use laptops instead of phones.	Technology such as smartphones should be leveraged to maximize learning. However, teachers should ensure that they are only being used in the classroom to achieve the intended learning outcomes.
12. Is there anything that you would like to say regarding things that we have been discussing?	We are ALL addicted to our means of communication (the phone and all the apps) these days. It is pathetic. We barely converse anymore. Young people are severely lacking in social etiquette	There is a tendency for these adolescents to be smartphone dependent because they have grown up with them and were raised to use them. They should have many more opportunities to	None

	because we don't practice that anymore.	watch others do things or demonstrate how things are done.	
13. Do you have any questions regarding our subject of discussion?	Have you explored the intense PRESSURE to have the latest and greatest phone and gadgets that go with them? Students are adamant that they must have it!	No thank you.	None
10. What activities are the students involved in that do not require students to go online or use their smartphones? Do the students enjoy these activities?	During class they should not be using their phone. But, they all WANT to!?	Creating or drawing maps or pictures, viewing pictures, analyzing data, group work to recreate and talk about topics, social interaction, walking tours and physical exercise.	Laboratory work in Science. Group dynamics with printed resource sheets.

APPENDIX F

1. How many phones do you have? What do you need your phone(s) for?	Most participants have 1 phone..
	Social mostly communication Because we're social animals...hunters gather support.
	Entertainment relaxation camera music.
	Notes google classroom
	We've been trained to rely on phones
	(6th grade) It was mandatory for students to use
2. How does not having your phone on you make you feel and why do you think this is so? **MOTIVATION**	Bored anxious uneasy somethings missing like losing a part of yourself losing a part of yourself, Less anxious cause I was unreachable. Instant gratification, comforting, relieves boredom, It is a pet I have [to] look after like a tamagotchi
3. Has your phone ever been withdrawn from you? By your parents? Teachers? How do you feel when you don't have your phone or it is taken away from you? **IMPACTS**	Yes if they are used while teachers are giving lectures. Yes, by using at inappropriate times Social gatherings, dinners (especially dinner etiquette) Limiting phone times, using in cars affect the eyes Punishment for bad grades or behavior. Yes, my parents have taken away my phone from me when they think I shouldn't be using it or when I overuse my phone. This sometimes makes me feel restricted and incapable of controlling my own life, but in other times, it makes me feel relieved, as I can refocus on my studies. Yes, as a punishment for not doing my studies right or well enough. It was very disappointing and frustrating whenever that happens because I have grown too attached to it and has a sense of ownership over it. It is exactly this feeling that my parents have used against me to motivate studying
4. What on-line activities absorb most of your time? **ACTIVITY** **Do you stay on-line longer than you intended on any of them? Why?** **TIME**	Instagram, YouTube, TikTok Yes, one video leads to another and it just doesn't end. This is most commonly known as the YouTube Rabbithole (concept applicable to other medias) Yes, it's a constant chain of posts that continue to pull you in Netflix, Facebook, Messenger, Yes, it's addicting which forced me to keep on using. Instagram, as the explore page introduces me to so many posts and videos that seems to never have an end, and Messenger, as I end up talking to some of my friends for way longer than I anticipate. Reddit, Snapchat discord (gamers groups) dating (furries, hentai, pedos, scammers) I meant to list topics that are usually not mentioned about things that happen on discord. Discord's intended purpose is for gamers to communicate with

each other with more convenience as they can text, voice chat, and video chat in the same location.

Disclaimer: I have no interest in the things mentioned, I am just stating things I have seen on others do on discord.
Netflix, Youtube, Instagram

I stay longer than I should because usually something comes up and I want to look it up. I see more posts on Instagram and I end up wanting to look at more.

Yes, even if I put a limit on the time I spend online I choose to ignore it when the time comes.
_____
So basically, on this app called discord, there would be servers you could join to text or talk with people that you know or don't know. Usually, there would be servers with text channels for different topics. In some servers, there would be specific NSFW channels for hentai (Hentai is basically anime pornography (don't search it up, you will find disturbing things)) and (sometimes) furry pornography. Since discord servers can be joined through links that anyone can open, there are a lot of strangers and some of these strangers would be pedophiles. There are also discord bots which are discord accounts that are being controlled by code. Some people would make discord bots that send spam messages to everyone in the discord server.
Instagram and YouTube
Weibo

Yes, time goes so fast when I use phone.
Psychologically, I believe most people have the same mindset, and that is we have time. Our minds are easily fooled, and sometimes one chooses not to acknowledge the obvious procrastination because he or she has confidence that the actual needed work and studies will be done. What ends up happening is the assignments are dragged onto the day before due, are completed with exhaustion, and sometimes rewards an A. This vicious cycle of false confidence keeps us looped in.

| 5. How often do your family or friends comment or complain about how much time you spend on-line? **TIME** | Quite frequently… My mom thinks I'm only using my phone, not studying (maybe it's partially true too ???)

They complain whenever I go to the optician and my eyesight gets worse than the previous appointment.

Depends on which parent

Not much if you don't use your electronics with them.

My parents don't really care about how much time I spend on-line. But they complain if I go on-line the entire night.

When I'm at a family dinner or when I have been using it for too long

Rarely nowadays, I have control over how much I spend time on it.

They don't complain if they don't see it. My dad complains about it more than my mom does, especially if I'm using it during mealtimes.

My sister complained...her kids stay on 1 hour (timed)

My parents complain about my habit of watching youtube (algorithms and data harvesting to suggest new songs/sites videos/purchases/marketing) or netflix everytime I eat. |

	My parents, especially my mom, complains or judges me whenever I am using my phone for things that are not academics related, so quite often. This could also be when you are busy with your phone while talking to/meeting friends; at a meal etc. Monthly My parents have a somewhat uncommon reaction to my screentime. More than the productivity, they worry about my eyesight and fear of the possible (probable) worsening myopia. My parents assume that I never do work and complain all the time. Depends on what I use it for, if school work then they don't say anything, but for entertainment they limit it
6. Have you ever been confronted about the time you spend on-line? **TIME** **If yes how did you feel when confronted about the time you spend on-line? How did you defend yourself?** **MOTIVATION**	I used to be confronted by my parents when I was younger about the time I spend online I defended myself by saying that it's completely normal and that every kid is like that nowadays. Very often, but most of the time I stay up late at night would be for studies (what resulted in me working on them so late is procrastination but…), so most of the times I get away with it. Sometimes on weekends, if I overuse electronics, they would drag me outside and got to citymart or something "to buy food" People have complained that I'm not online all the time so they can't contact me for whatever reason, usually group work related. Apps like Messenger and text messages make us believe that we can get to people whenever we want and feel like they should also be available whenever we are.
7. Have you ever tried to limit your smartphone use (at dinner/work/class/when meeting friends)? **If yes why? Were you successful at it?** **TIME**	I try to limit my smartphone use whenever I'm traveling. When I try to limit phone use, I will use something else such as the tablet or computer and makes no difference. There's this feature on iPhones that allows you to limit the time spent on certain applications and set time limits. The attempt was unsuccessful. However, I have a fair amount of self control, so I do not use my phone other than what I am supposed to use it for when needed. As of the problem reflected (the "snooze" button of screen limit), there is an application called Cold Turkey that straight up shuts it down until time is up that is great for this purpose. The usage of the time limits on certain applications on my phone has not been successful because it came with an "Ignore Limit" function that easily allowed me to ignore all reminders. I have attempted in reducing my screentime to 3 hours a day before like one of my good friend has with simply setting up a few alarms Yes, when I am in a gathering I try not to use phone to verbally, physically socialize with people in the gathering. Also, when I realize I'm distracted while studying I throw my phone on my bed. I guess it depends on the situation and on the person; the person might decide to use their phone if the people they are around are not someone they enjoy interacting with; on the other hand, if they enjoy being with the people they are around, they'd see those people as more important (worth interacting) then their phone Yes, I have tried setting a time limit on each app so that it reminds me when I've been using a certain app for too long. I use my phone until the power is gone and if I'm not near the cable, I don't use my phone. Yes, whenever my cousins and I meet, we all try to spend time together and stop ourselves from using our own phones. Instead of socializing online, we try to socialize with each other, and whoever uses their phone would get judged upon(in a joking way).

8. **Have you formed new relationships with fellow on-line users recently and on which sites do you connect socially?** **ACTIVITY &** **MOTIVATION**	No, but I think most people use messenger to connect socially. No, I have personally met all my friends on Facebook and I have never contacted anyone I have never actually met. Yes, people randomly hit each other up on Instagram and try to slide into dms even if they haven't met in real life. No I haven't. The only reason I am on social media is to get more information and sometimes if I am lucky, I receive information that I missed out. Of course, my social abilities aren't decent enough, so my experience should not be taken with weight Yes, you can not only form new relationships with people you don't know, but you can also strengthen your existing relationships. Yes, but it was through a friend I knew from school.
9. **What do you find appealing or soothing about going on-line?** **MOTIVATION**	Having access to any information regarding anything. Being contactable or able to contact someone when I'm in trouble. It makes me feel less empty when I watch youtube or netflix or just scrolling through instagram. It is entertaining and keeps me not bored When you're on social media, you don't have to think about the stress you have in your real life and you can mindlessly scroll through social media, you get a chance to ignore your stressful responsibilities. Escaping from reality. In the duration of internet use, I feel as if I do not have any concerns or worry. The outside world is cut out, and I drown in my own world of procrastination
10. **How do you think your smartphone has influenced your work and/or academic performance?** **IMPACT**	It helps me with my academics sometimes but it also serves as a distraction and causes me to be less productive. It contributes as a distraction and often causes most of us to procrastinate. It makes me more lazy and less focused on work. My phone has made doing certain assignments easier. For example, making videos and posting pictures of written assignments are easy to do because of phones. It makes me forget about some of my responsibilities, lose track of time, and get caught up in chatting with a friend or going on social media. It made it hard to focus on my work as I get easily distracted. I could have finished my work faster if I didn't have my phone with me It certainly drags the schedule behind, but I can always manage to finish work on time, so not that big of a factor.
11. **Have you ever woken up at night to check your phone?** **If yes, in what ways have nighttime on-line activities affected your sleep?** **IMPACT**	Nope... Nope. I'm a sound sleeper. My alarm cannot even wake me. I think its yes for most of the people. No. I rarely do that. I can't wake up on time in the morning since I check my phone at night. Well, we get up for late-night snacks which have led to looking at our phones, and then it led to not sleeping by using our phone all night. No, except when I can't fall asleep, then I check my phone again. Sometimes, only to check the time, or to do something important (text someone, set an alarm, check GC)
12. **What negative experiences if any have you had on-line and why do you think this happened?**	Misinterpretation of the tone of text messages with people that I wasn't too familiar with has led to arguments. I think this happened due to misjudgment of the things we were saying to each other as we had not known each other very well.

IMPACT	
	Arguments happen more easily online since people are behind a screen so they are bold to speak their minds and bash on other people.
	Children can access adult sites easily, this happens because there isn't really age checking.
	If you're online as an underaged person especially as a girl, you're often prey to online predators and it's really not safe. Often times they lie to make you trust them before moving on to more manipulative tactics in order to get explicit photos and such.
	Lower Self Esteem results from using your phone too much because of constant exposure to social media. Encourages body dysmorphia to young girls especially.
	There are a lot of conflicts online since it is easier to argue with people online than in real life.
	The generally so-called "toxicity" is very common these days among the youngsters. They would intentionally start a fight and watch the conflict unravel before their eyes, without having to worry about consequences. I think this is caused by the nature of the internet. There is no substantial punishment that can deter people from behaving like jack-donkeys, and there isn't a legalized set of laws that regulate people's actions over the net (the only times police are involved in a case would be if the victim was harmed in real life in some way).
13. Is there anything that you would like to say (comments) regarding things that we have been discussing?	Phones good? Bad? We don't know, we'll find out later :0.
	Issues relating to the Dark Web where all kinds of really bad and shady things go down. Porn child porn, paedophilia, snuff movies, animal torture and mutilation.
	I believe it would be useful to consider and discuss the mindset and thought process that undergoes everytime we procrastinate.
14. Do you have any questions regarding our subject of discussion?	No. I wonder if there is anyone in the world that are able to forfeit the ability to use smartphones

APPENDIX G

Student Observations

What incident was observed	**Where and When** was the action/incident observed (location date and time)	**Who** was involved in the observed incident (student and researcher Boy or Girl)	**How and length**? By observation for several minutes	**Why?** - Identifying the reasons/purpose/intention attached to the phenomenon
Smartphone hidden under leg	During a Health quiz	Girl in grade 10	5 minutes	Inadequate preparation for quiz
Smartphone concealed inside hardcover book	During English Reading lesson. Student was seated a distance away from the teacher, facing the teacher	Boy in grade 11	3 minutes	Boredom/distraction
Smartphone obscured by resting it against laptop screen	During Biology lesson.	Boy in grade 9	5 minutes	Distraction/Pre-occupation with social communication
Smartphone obscured resting against sheet music on music stand	During Music practice in the music room. Student was at the back of the music room	Boy in grade 10	8 minutes	Pre-occupied and intent on watching an absorbing YouTube post
Smartphone under desk	During Physics lesson	Boy and girl in grade 9	10 minutes	Smartphone was not being used. Just accessible close by
Smartphone in pocket	During usual school day	Boys and girls in grades 9 - 12	N.A.	Smartphone was not being used. Just accessible close by. Most phones were kept on students' person.

Smartphone used during restroom visit	In the girls restroom	Most of the girls observed in the restroom. Some grade 10 and 11 and unknown grades, but	1 – 5 minutes	Pre-occupation with social communication
Smartphone scrolling down screen (alone at table in canteen whilst eating)	Canteen	Girl and boy in unknown grades	10 – 20 minutes (for the duration of the meal)	Not wanting to feel alone or appear alone. Boredom. Pre-occupation with social communication.
When with friends (Relaxing in seating area)	In student waiting area of Building 1, lounge area of Building 1 and 2 and outside benches at Building 2	Boys and girls of all grade levels	10 – 30 minutes	Pre-occupation with other social communication. Sharing information (photos, video clips and posts).
Gaming (after completion of work)	Before the start of Health lesson, during exam preparation/study period	Two boys in grade 9 and 10	10 – 20 minutes	Self - confessed addiction to gaming.
Watching sport replays	During exam preparation/study period	Group of 4 boys in grades 10, 11 and 12	10 minutes	Members of sports teams at school and avid supporters learning tactics and gaining motivation.
Watching Series	During exam preparation/study period	Two girls in grade 10 and a boy in grade 11	30 – 40 minutes	Self – confessed addicts to series
Watching YouTube	During Technology class	Grade 10 boy	15 – 30 minutes	As and educational aid while designing a computer game

Watching YouTube	During a break between periods	Girls and boys in grades 9 - 12	10 – 15 minutes	For relaxation, stress-relief and

APPENDIX H

	Respondent				
	Henry 48 BurmeseChinese 35y	Harold 49 Taiwan 6y	Oliver 45 Chinese 8y	Petunia 47 Burma 47y	Zed 54 Burma 19y
1. In your opinion how many hours per day does your child spend on their smartphone at home?	4hrs	They don't use smartphones all the time but combined with computers they are on devices almost all the time. On phones probably from 8-12 hrs.	They did not know, and my answer is around 4 hrs on phone and 6hrs on laptop	Peti uses her phone for about 4 hrs a day at home and it is usually social media applications. She uses her laptop much more but only to watch YouTube and Netflix while drawing or doing something else.	6 hrs
a. Do you think this is too much? Too little? Please explain?	Too much	This is too much because their eyes are getting worse day by day.	Too much. Sleep takes 10 hours, eating three meals takes 2 hours, and spending the rest 10 of 12 hours on device is too much.	I think that she uses too much screen time especially nowadays because there is the quarantine. She wakes up very early in the morning and when I wake up she is already using her phone or laptop. I think this might be a little unhealthy for her but on school days she uses then less	Yes because they are not focusing on their studies and just wasting their time playing games.
b. What is an optimum amount of time your child should spend on their smart phone?	2hrs	Optimum probably around 3-4 hours.	One hour	I think she should spend 2 hours on her smartphone because it is important to socialize but i do think that she should use her other screen, her laptop, much less because she is on that laptop a lot of hours in the day. I think she uses her laptop around 6 hours so she should make that less	3 hours
c. What would happen if they spent more?	They would lose contact with the real world.	It will harm their eyes, physical and intellectual development, affect their studies and time management	It is going to sore their eyes since they will be on their screens all day.	I think that if she spent more time than this on her smartphone or laptop, her eyesight and focusing ability might not be good anymore. I think screens may be a distraction for her sometimes from family time or even school work.	Their eyesight will become bad, it may affect their grades, and it may make them lazy and unproductive in the future
d. Do you consider the level of smartphone use by your child problematic or optimal? Please explain.	Problematic	It is obviously problematic considering the previous questions.	Problematic because it is simply too long, wasting his life and depleting his eyes	Problematic	I consider it as okay because although they use too much, they are still maintaining their grades and succeeding academically.
2. How does your child react when their smartphone is withdrawn from them? Why do you think they	He wouldn't react. He would comply with restrictions.	When there are power cuts and their phones are out of battery, they act irritated because there	He becomes angry because children like phones and do not like being controlled.	I don't really take her smartphone away from her physically but when I ask her to stop using it and do something else, she doesn't complain	They get angry and frustrated and they yell back at me to not take their phones away.

react in such a manner?		are not a lot of things they can do without it.		much. She is definitely not completely addicted to her smartphone so I am happy about that.	
3. What sites does your child enjoy spending time on? Why do they enjoy spending time on these sites? Are the sites problematic or beneficial to your child?	He spends most of his screen time on Reddit, TikTok, Instagram. They provide entertainment through short videos. These sites are partially beneficial to him because he enjoys reading up on new things on Reddit.	Although they do work on devices as well, they enjoy reading novels and watching YouTube a lot which is somewhat beneficial but having some negative effects on Ken when he mimics and becomes more "spoiled".	YouTube, and even though it's educational it can be problematic at times like right now.	The sites she uses are blogs where people share their daily life and their events and happenings. She also searches up makeup for inspiration for herself because she really likes doing makeup on herself and painting herself as well. The sites she uses are not dangerous and I think they are beneficial to her	I see them watch a lot of movies and K-dramas on Netflix and they like watching movies very excessively to the point that it distracts them from important things. They can be a little problematic because they are now just wasting their time and doing useless things when they should be going outside to exercise and breathe fresh air.
4. In your opinion how should children spend their time on smartphones?	Children should pick up hobbies and learn new things.	They can do whatever they want but shorten the time and make sure it doesn't distract them from work or sleep.	They should have a timer and a set amount of time they can use a day.	I think that she should continue using Twitter because if something current does happen, it gets reported on the application so she can be aware of the things happening around the world. I like the way she uses Instagram because it lets her do things she is passionate about but I don't want her to overshare with strangers.	I think they should use it mainly for studying and some time on social media and whatever they want to do during their free time.
5. Which three smartphone applications have you observed to be used most? (Please mention the 3 of them here).	Facebook Messenger Training apps (skillshare, masterclass)	Chrome, YouTube, some game that he calls with his friends and play (PUBG, Mobile Legends)	YouTube 20h40, Identity V Game 15h30, Facebook, Messenger From Oli: social media like Facebook and Instagram have never been a big part of my life, and these days I rarely talk on messenger	Pet spends the most time on Instagram and Twitter on her phone. She is very artistic and she likes doing makeup or painting on her face and she also likes fashion so she dresses up and takes photos. She expresses her artistry on Instagram and shares her passion with her followers. On Twitter, she socializes with people and that is where she gets her current news from. She also uses Youtube because she likes watching dance videos since she is also a dancer and she sometimes also makes her own videos and posts them as well.	Facebook, Messenger, Instagram
6. What are the positive impacts of smartphone use by adolescent children?	Smartphones help them socialize with their peers and learn new hobbies and skills.	They get connected to the outer world, socialize, and also makes working easier sometimes	Easy access to knowledge and communication with peers (Oli: yeah now that we can't even gather)	I think that using smartphones are important, especially now because of the quarantine for her to stay in contact with her friends and our family since we cannot visit each other. I don't want her to miss out so I think that is a positive thing.	For now, it helps them connect with their friends during lockdown because connections are important in their future. They can also document what happens in their lives to have recorded memories in the future.
7. What are the negative consequences of smartphone use by the	There is a lot of negative influence on smartphone applications that adolescents use.	Use of smartphones definitely caused their grades to drop, and the abnormal schedule will also affect their physical	Takes away time for study and interferes with study plans. having worse eyes, not listening to our	I think that smartphones have negative effects as well because I think using too much is not healthy for them. It is bad for their	I think it affects their academic and physical development negatively and cause discipline issues because using

adolescents? Do you think it affects their academic, social, physical and intellectual development and cause discipline issues? Please explain.	Peer pressure is a big issue on social media sites. The effect depends on the children's self esteem.	and intellectual development. About discipline issues, as mentioned before, they sometimes act spoiled (especially Ken) and also not follow a regular schedule.	words, and having bad attitude when confronted during their games (Oli: sadly I can testify)	eyes and also it is very distracting to them because they cannot focus on their schoolwork or other work that they have to do.	phones will make them less smart and not concentrate on their studies. It will also just make them stay at home and lie down everywhere and not do exercise, which is important for physical development and also why my children are all very thin and unfit and barely moves around and just asks the maids to fetch them water instead of going to the kitchen and drinking themselves. It also makes them lazy and bad at time management.
8. Have parents raised issues in school meetings about possession or use of smartphones by students? What issues have they raised and how have they been dealt with?	No, smartphones aren't considered a major issue.	Not sure, didn't participate in the committee	My parents don't go to school meetings because they have trouble with English and they don't think I need much help in academics *aWkwARd	Not a lot of parents have talked about the issues because they spoil their children a lot these days. I saw a lot of kids and little children that are very young using ipads and their parents don't take their phones away from them either.	I don't think they have raised issues because we understand a little bit that technology is important in education. However, I'm not actively part of the PTA or any parent-school events so I wouldn't know.
9. How much data does your child use monthly? You can estimate it in monetary terms or in megabytes.	10,000-15,000 kyats per month.	We have Wi-Fi at home so not sure. (My own estimation: 30-50 GB)	30k worth of data packs (1k is 1gb) plus the infinite data pack from WiFi	Pet uses around 10,000 kyats every month for data. She doesn't always use the internet, because sometimes she uses her phone but she plays games or just listens to music.	They use around 20,000-30,000 kyats worth of phone balance, which would be around 14,000-24,000 megabytes.
10. What activities that do not require your child to go online or to use their smartphones does your child do? Do they enjoy these activities?	He plays basketball, goes to the gym, and plays music and reads.	Ken goes out and skate or rides his bike sometimes, and Howard plays the piano, and they are not forced to do any of these so they probably enjoy it.	None. (Oli: idk what happened to me these years but everything no longer intrigued me; perhaps the tolerance to dopamine I developed having game addictions and all)	She dances a lot because it is her form of regular exercise. She likes to keep a bit active at our house. She also plays with her dogs because we have a big yard so they can run around and play often.	They don't do other activities even though I am always telling them to go out and exercise. Sometimes they go out to meet their friends but that's it.
11. What recommendations would you make about the smartphone use by adolescents in general?	Adolescents should be aware of how much they use their smartphones and how it affects them.	Should have more limits to prevent smartphones from distracting them and also our school required a phone since middle school and back then there aren't as many restrictions compared to the middle schoolers now so many of us developed addiction.	Set timers and have set amounts of time. (From Oscar: to all the parents out there, the less and later exposure of your children to modern technology or rather games, the less chance there is to let them have an addiction. Acquaint your child with the real world before the virtual one so they don't take interest so early on that they can't see anything else fun; it also helps to not restrain your children too much on this matter, as they will feel rebellious by	I think that they should be able to use them because they are important but they should really reduce the hours they use because it will affect their schoolwork and it is really detrimental to some children	I think smartphone use should be limited for their own good, but not entirely restricted because being social is important too.

			nature and defy what is right)		
12. Is there anything that you would like to say regarding things that we have been discussing?	It is important for adolescents to be able to judge their smartphone usage by themselves. Teenagers should learn how to control themselves and stray away from smartphone addictions. Harsh family interventions only make it worse for adolescents and should be careful in setting restrictions.	No	I suggest less online classes and have more paper work rather than google classroom, and give children more opportunities to use libraries and paper books. Everything is in electronic form, and it's a really bad lifestyle to live on electronics.	It is important to talk more about the unhealthiness and the negative effects of using too much screen time in school. It should be more taught to them the actual health impacts of these too.	There is nothing.
13. Do you have any questions regarding our subject of discussion?	No	No	None	No I don't have any questions	No

Almost the whole day

A lot, too much.

Around 3hrs sounds reasonable

Chores and homework will be undone if they are distracted

I consider it problematic, firstly lack of sleep and secondly neglected duties

She doesn't like it, she asks for her phone back. The reason may be because she is too addicted to what she does on her phone.

She reads a lot of web novels and stories so she is probably on those websites. They are not problematic for her but still she shouldn't read all the time.

News, educational websites, especially health related information at this time.

Netflix; Messenger; Games

Keeping contact with patents, when we are home I can check up on her. Call her and make her do chores.

Although I am worried that she might be influenced badly, I still had to let her use her phone because it's inevitable in this current society. For now, I don't think it has affected her academically but I am still worried and will keep an eye on her.

I don't really go to parent meetings.

You can estimate it in monetary terms or in megabytes. Ans: Around 20000ks last her about 1 month and a half.

Games, I think she can play more fun games in real life

Addiction to games is very bad so you should play moderately. Do not ignore your surroundings.

I want children to use less screen time and to not be obsessed with their devices.

Can the project/research include days like no phone days?

APPENDIX I

INTERVIEW QUESTIONS FOR PARENTS

1. In your opinion how many hours per day does your child spend on their smartphone at home?

a. Do you think this is too much? Too little? Please explain?

b. What is an optimum amount of time your child should spend on their smart phone?

c. What would happen if they spent more?

d. Do you consider the level of smartphone use by your child problematic or optimal? Please explain.

2. How does your child react when their smartphone is withdrawn from them? Why do you think they react in such a manner?

3. What sites does your child enjoy spending time on? Why do they enjoy spending time on these sites? Are the sites problematic or beneficial to your child?

4. In your opinion how should children spend their time on smartphones?

5. Which three smartphone applications have you observed to be used most? (Please mention the 3 of them here).

6. What are the positive impacts of smartphone use by adolescent children?

7. What are the negative consequences of smartphone use by the adolescents? Do you think it affects their academic, social, physical and intellectual development and cause discipline issues? Please explain.

8. Have parents raised issues in school meetings about possession or use of smartphones by students? What issues have they raised and how have they been dealt with?

9. How much data does your child use monthly? You can estimate it in monetary terms or in megabytes.

10. What activities that do not require your child to go online or to use their smartphones does your child do? Do they enjoy these activities?

11. What recommendations would you make about the smartphone use by adolescents in general?

12. Is there anything that you would like to say regarding things that we have been discussing?

13. Do you have any questions regarding our subject of discussion?

APPENDIX J

JAY – Male 24/2/2020 In person and follow up e-mail
Age: 60 Nationality: GB Yangon: 20 years HS: 27 years

INTERVIEW QUESTIONS FOR THE PRINCIPAL OF SCHOOL

1. In your opinion what are the main

i. advantages of student smartphone use within the school?

Access to online platforms and educational websites.

ii. challenges experienced with student smartphone use at school?

Abusing the privilege of being allowed to use smart phones at school. Mainly by being on social media and posting or watching inappropriate content.

2. What policies has the school promulgated to regulate smartphone use?

See pg 39 of handbook.

Please explain the policy and how it is enforced. If there is none, explain how smartphone use is regulated within the school?

See pg 21 of handbook.

3. Is there a national or provincial policy governing students' smartphone use in schools? If yes tell me about it. Is it effective in addressing smartphone use in your school?

No

4. Are there sites which the students frequent which are considered problematic by the school?

Htet Lin can provide the list of sites that are blocked.

i Why do you think they do so?

Messaging friends, social media obsession.

ii Why are these sites considered problematic?

Distract from schoolwork. Encourage inattentiveness.

iii How have you dealt with this problem?

Blocked on school wifi. If caught accessing through sim consequences on pg 21 of handbook.

5. In your opinion how should the students spend their time on the smartphones?

Researching. Accessing apps when teacher instructs them to do so.

6. What are the positive impacts of smartphone use by the students from the school?

None. A laptop meets all their needs.

7. What are the negative consequences of smartphone use by the adolescents in the school?

Lack of focus. Inattentiveness. Spreading of rumours and gossip.

Is there an impact on student academic, social, physical and intellectual development?

Yes. Academics suffer if not used appropriately also vocab. and writing becomes stilted lol btw etc. Become less socially able in face to face situations. I read that all long-term mobile users get a stooped posture from constantly looking down at their phone and poor eye sight from tiny screen. Intellectually stunted.

8. How has the smartphone use by students impacted on the school discipline and ethical behavior?

Negatively. Another layer of rules and regulations required and rules to be broken.

Do you consider the level of smartphone use among the students optimal or problematic? Please explain.

Problematic. For all the reasons listed above.

9. How often are smartphone phones discussed in school meetings? (What issues have been raised?)

Rarely. It has become accepted by teachers and administrators as a part of 21 Century education and daily life.

10. What recommendations could be made about the smartphone use by the students at the school?

Ban them entirely. It has had a measure of success at other schools globally.

11. Is there anything that you would like to say regarding things that we have been discussing?

It is not too late to redress the harm done but I feel educators need to agree upon common policy as a school that acts independently would undoubtedly face push back form stakeholders.

12. Do you have any questions regarding our subject of discussion?

Can you fix this quandary?

APPENDIX K

SCHOOL HANDBOOK TECHNOLOGY GUIDELINES

Senior Privilege The Senior Privileges program (American English Handbook) is provided to members of the Grade 12 class only. With privilege comes responsibility. Seniors are expected to live up to all their school responsibilities if they wish to have these privileges continue for the duration of their senior year. Senior privileges can be withdrawn at any time. These privileges may be: 0 Grade 12 students may wear casual dress as identified in the 'Casual Dress Days' section above. Inappropriate casual dress will lead to a senior having this privilege taken away. 0 Grade 12 students who have a cumulative average of 90% or higher for any second semester class may opt out of taking the second semester exam. Senior Privilege Eligibility For seniors to be eligible for privileges, they must be in good standing. Any or all privileges may be lost if the student fails to behave responsibly. Seniors having had privileges taken away may earn them back by exhibiting appropriate behavior. Behaving responsibly includes: 0 Arriving on time to school and all classes 0 Dressing appropriately. at all times 0 Being respectful of others 0 Adhering to school rules Graduation is scheduled for May 19, 2020. Seniors are expected to participate in preparation and graduation practice leading up to the event. Consequence Guide The inappropriate behaviors listed below are not exhaustive and the consequences serve as general guidelines. Depending on the severity, frequency and accompanying behaviors of an offense, school administration may deviate from these guidelines at their discretion. BEHAVIOR 1st OFFENCE 2nd OFFENCE 3rd OFFENCE -- Electronics Confiscation of item and Unauthorized use of Confiscation of item and Confiscation of item and turned in to administration. devices in classrooms or turned in to administration. turned in to administration. Disciplinary action at during school events. Item held for 1 day. Item held for 3 days. discretion of administration. .-- On 5th Tardy in Qtr: On 711' Tardy in Qt.: 30 minute detention Parents Informed Tardy to School On 4th Tardy in Quarter: On 6th Tardy in Qtr: Loss ofECA /Athletics (Based on Quarter) Warning 60 minute detention participation Tardy to Class Recorded in Gradebook Recorded in Gradebook Recorded in Gradebook > 15 minutes marked absent > 15 minutes marked absent > 15 minutes marked absent Failure to Sign In ' Students late to school are Warning 30 minute detention 60 minute detention expected to sign in with receptionist/office. 21 ISM ELECTRONIC RESOURCES The International School of Myanmar actively promotes the appropriate use of technology in education. * To ensure that students, staff, parents and other community members can

take full advantage of the technologies available, all users of technology must have proper authorization and adhere to the school's code of conduct. When parents complete the application for admissions or pay annual tuition, and students attend ISM, both indicate agreement to abide by the following technology code of conduct. ISM TECHNOLOGY CODE OF CONDUCT 0 All use of technology must be in support of and consistent with the purposes of ISM. It is the user's responsibility to keep all inappropriate materials and files or other software dangerous to the integrity ofthe system away from the school's technology. 0 Students must have an anti-virus protection system installed on their personal technology prior to accessing the school's system. 0 The school expects that students will not access inappropriate materials. Inappropriate use, materials and/or access include, but are not limited to, plagiarism, pornography, games, hate mail, chain letters, unauthorized access (hacking), social networking, and email messages that initiate false alarms, etc. 0 The school expects that students will not publish inappropriate materials. Inappropriate publishing includes, but is not limited to, personal attacks, harassment, illegal activities, and publishing private or personal details. 0 It is contrary to school policy for current students to be friends or to communicate with current ISM teachers through social media sites unless it is a class or club site approved by the activity advisor and reported to school administration. 0 Each user shall respect another individual's work, files, passwords and programs. Users shall not intentionally seek information on, obtain copies of, or modify files, other data, or passwords belonging to other users, or misrepresent others using the school's technology or other networks. Individuals must have full responsibility for the use of their account; They should not share passwords or accounts. 0 Students are not to use a teacher's computer without permission from the teacher. 0 It is the user's responsibility to exercise reasonable judgment to ensure that no equipment or software is destroyed, modified, or abused in any way. Users must ensure that all food and drink are kept away from all equipment. 0 Users need to be responsible and not knowingly degrade the performance of the network. Downloads of audio or video bro~dcasts that are not for assigned educational purposes are prohibited during the school day because of the impact on bandwidth. Downloading files from the Internet may also be restricted at the discretion of the administration. 39 0 Network administrators may review files and communications to maintain system integrity and insure that users are using the system responsibly. Users should not expect that files stored on school servers would always be private. Failure to adhere to the above technology code of conduct may result in disciplinary action. Depending on the nature of

the offense, consequences will range from verbal reprimand, detention, a meeting with parents, to suspension of right to use or from school, as deemed appropriate by school administration. The administration reserves the right to escalate consequences or choose other disciplinary measures including a recommendation for expulsion for the use of technology to harm, threaten, intimidate or use as a tool of vandalism. Information Technology Integration ISM is committed to integrating technology throughout the curriculum. To support students in their academic pursuits, there are two computer labs available for student use. However, we encourage student to bring their laptops for classroom usage as teachers continue to integrate technology within their courses. The High School has school-wide wireless capacity ensuring full network access in all classrooms and all common areas. High School students are expected to check their ismyanmar.com email address everyday during the school week to remain updated with school work and communication from their teachers and ISM. STUDENT SERVICES Student services are provided to offer support for learning, enrich the student experience, provide information and facilitate specialized assistance. Students are encouraged to use these services. High School Office The HS office is an information center and location where various forms and documents may be obtained. The office is where communication with home is generally done. High School Reception Reception is where the ISM community and visitors make first contact once inside the school gate. Students are expected to sign in (late to school) and sign out (early departure) at this location. Morning Announcements I Message Board Morning announcements are sent to students electronically each day. It is the student's responsibility to check the morning announcements to stay informed. The message boards in reception will also have morning announcements streaming as well as special announcements, advertisements, recognition of student successes and accomplishments. School Counseling The High School Counseling program is an essential part of ISM's educational program. Counselors collaborate with students, parents, teachers and administration to facilitate student achievement through a 40

APPENDIX L

Kay - a 46 year old, female Bahamian, 2 years at the target school, 10 years in total.

1. What are the main issues that you have had to deal with concerning student smartphone use, (both in and out of school)? Could you elaborate on each of these please?
Distraction in classes. This is undocumented because advisory period was removed. They do text during a counselling session or go on social media. They have done things like hacking (gaining unlawful access to sites and data). Use
 what specifically are they distracted by? Is it notifications, social networking, just the "release" or "hit" of checking up on something that's always available and always "attentive" or rewarding in some way?
social pressures, would you say that it's online bullying or misrepresentations of perfect lives online or a need to have the latest gadget or to constantly display your life and activities
 self esteem issues, this is probably informed by "perfect lives" above and constant comparison with others' pseudo lives online
lack of communication skills do you mean the WAY they communicate or a lack of conception of what the appropriate social conventions are or what exactly are they lacking? How are they communicating?
2. In your opinion how many hours per day does each student spend on their smartphone at school?
I do not think they are on it continually all day, but they definitely "sneak" glances at it during classes and are on it during the breaks. There are 4 boys who sit in the lobby and play videogames on their phones before school, during breaks and after school. I think they are in grade 9. They might be good students to interview. A guess at how many hours you think they would be spending on their phones?
3. Do you consider the level of smartphone use among the students problematic or optimal? Please explain.
We need to embrace technology and integrate smart phone use within the classroom, make it a teaching aid. When I do time management skills will students, I show them how to use the calendar, note and alarm functions in their phone to help them manage their time. So are you saying they use their phones optimally or does it fall more into a problematic range of use where they depend on it chronically and it distracts them
4. What sites do students enjoy spending time on? Why do they do so? Are the sites problematic or beneficial to the students? In your opinion how should the students spend their time on the smartphones?
tic tok, facebook, snapchat
5. Do you observe dependent or "addictive" behaviour in the students with regards to their smartphones use? Please explain. Yes there is definitely addictive behaviour
6. How do the students react when their smartphones are withdrawn from them? Please share your opinion about why this is so. I have never taken a student's phone from them.

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7. What are the positive impacts of smartphone use by the students at school? Please explain further.

It can be used as a teaching tool and aid to students, see number 3

8. Can you identify negative consequences of smartphone use by adolescents in the school, albeit on student academic, social, physical or intellectual development or school discipline and ethos?

It retards social development, students do not learn the art of conversation, such as non verbal cues, eye contact, tone and inflection. This missing skill can impede their promotion professionally. From a self esteem perspective there is a dependence on "likes" and opinions of others for validity and acceptance.

9. How often are smart phones discussed in school meetings? (What issues have been raised by teachers, parents, students or others?).

I dont have an answer for that

10. Explain how you feel about how smartphone use is regulated within the school.

There is no regulation here. Students are allowed to have their phones, but they cannot be used during examinations.

11. What recommendations would you make about the smartphone use of the students and the school?

Educators need to embrace it and utilize it as a learning tool.

12. Is there anything that you would like to say regarding things that we have been discussing?

I think it would be better if we sit and talk more in depth. I have been interrupted by students every time I attempted to do this. Let me know a time when you are free and I can block of some time to discuss further.

13. Do you have any questions regarding our subject of discussion?

APPENDIX M

SAN - Female   1.) 63   2.) U.S.   3.) 1 year Yangon   4.) 18 years total

1. In your opinion how many hours per day does each student spend on their smartphone at school
4 hours

i Do you think this is too much? Too little? Please explain?
Too much. WHY DO YOU SAY IT'S TOO MUCH? WHAT PROMTS THIS RESPONSE OR WHAT CONSEQUENSES HAVE YOU SEEN THAT MAKE IT SEEM THIS WAY. DO YOU FEEL THEY ARE USING THEIR PHONES AS A "FILLER" FOR ANY PERCEIVED "EMPTY" SPACE OR IS IT MORE OF A COMPULSION OR JUST A DISTRACION. I think it's because they've grown up with this and don't know how to function apart or be disconnect. We see it as an intrusion they see it AS personal space. Fulfills a function of detaching for them. They don't have other ways of finding quiet space – no tools for being still or quiet. Only feel happy comfortable when experiencing stimulus and sound. Input. Talk all the time. Lose value in the class meetings of empty space. Concept of paying attention has a different meaning to them. Eye contact has been lost, need sound or electronic buffer. Validated by noise. If they have noise they're valued.no action don't understand on alert causes anxiety doing this or dealing with. I have to say I can be sucked in just as easily. There's a sense of anxiety and validation and connection it's NOT available for connection create space and distance between you and the speaker Only way we can alter to develop and etiquette that used to have phones in baskets parents are worst offenders. Apron strings or umbilicus. No matter how many times schools try to cut this more and more disconnected from their kids. Drowning in email or tech. Not common to use email rather phone call also phone or text. Phu Pwint Facebook but no website instant messenger. Can't understand English

ii What is an optimum amount of time that students should spend on their smart phone?
1 hour - before school, and check phone at lunch break after tutorial PROBABLY AFTER SCHOOL IF THEY'RE WAITING? emergency

iii What would happen if they spent more?
They would be distracted from their school responsibilities. The level of maturity is lackingDO YOU THINK MOST OF THEM DO OR COULD MANAGE THESE DISTRACTION GIVE THE RIGHT TOOLS OR WITH THE RIGHT TRAINING

2. How do the students react when their smartphones are withdrawn from them?
They are NOT happy! Eye rolling slumping stomping hitting the wall. We fel disappointed they feel motioning example role model they're very skilled at disception HOW DO THEY COMMUNICATE THEIR DISPLEASURE?

Why do you think they react in such a manner?
Because we have become a society of instant communication and instant gratification. DO YOU THINK THAT PERHAPS THEY HAVE FORMED SOME PSYCHOLOGICAL ATTACHMENT AND FEELING OF SAFETY IN HAVING THEIR PHONE AND Status Ear buds message without wordsPERHAPS FEEL DISEMPOWERED OR "NAKED" WITHOUT IT?

3. What sites do student enjoy spending time on?
Social media DO YOU THINK THIS IS APPROPRIATE FOR THEIR AGE AND FOR THIS TIME IN HISTORY OR DO YOU THINK IT HAS BEEN ALLOWED TO DEVELOP UNCHECKED yes don't know how to talk to people about issues. Small talk hoe to ask

show interest in others. Stand and throw out prompts noticing details and rea dthe room Can they read emotions Don't take the time to feel. OR IS THERE ANOTHER ISSUE WHICH IS NOT SO NOTICEABLE OR ADDRESSED BY THE QUESTIONS SO FAR?

Why do they do so?
They are anxious about "Missing Out" on information and not being "connected" DO YOU HAVE A SUGGESTION AS TO HOW THIS FEAR OR COMPULSION COULD BE ASSUAGED OR HOW THEY COULD BE RE-SOCIALISED INTO DEALING WITH THEIR PHONES AND CONNECTION DIFFERENTLY?

i Are the sites problematic or beneficial to the students?
They are both. Problematic because it keeps them from their studies and is distracting, and beneficial because even the school emails them messages! DO YOU THINK THEY MIGHT BE SAFER BECAUSE OF THEIR PHONES OR MORE AT RISK?

ii In your opinion how should the students spend their time on the smartphones?
Only checking email and instant messages WHAT ABOUT WATCHING INSTRUCTIONAL VIDEOS AND LISTENING TO MUSIC OR OTHER POTENTIALLY PRODUCTIVE ACTIVITIES?

4. Which three smartphone applications have you observed to be used most? (Please state the three options here?)
Facebook, Twitter, SnapChat

5. What are the positive impacts of smartphone use by the students from school?
They are connected and can take care of business! DOES THIS MEAN IT HAS A MENTAL HEALTH BENEFIT AND ASSISTS IN ORGANISATION?

6. What are the negative consequences of smartphone use by the adolescents in the school, albeit on student academic, social, physical and intellectual development or school discipline or ethos?
All Focus is fragmented, repeatedly, all day long. COULD THIS BE PART OF HOW THE NEW GENERATION OPERATES AND PERHAPS ALIEN TO US BECAUSE WE GREW UP DOING THINGS DIFFERENTLY?

7. Do you consider the level of smartphone use among the students problematic or optimal? Please explain.
problematic - they just cannot put it down and be disconnected. MAYBE THEY FEEL UNSAFE WITHOUT THEIR PHONES. MAYBE IT'S LIKE AN EXTENTION OF THEMSELVES. THE UNIVERSAL ENABLER, THE CONSTANT SUPPORT.

8. How often are smartphones discussed in school meetings? (What issues have been raised?).
I don't know. But, I know it is an issue, especially with social media. HAVE YOU HEARD ANY OTHER STAFF TALKING ABOUT IT?

9. Does the school have any written or unwritten policy on the smartphone use within the school? If yes please explain the policy and how it is enforced. If no, explain how the smartphone use is regulated within the school.
I don't know. WHAT WOULD YOU SAY THE "UNWRITTEN" POLICY IS? You MENTIONED ETIQUETTE

10. What activities are the students involved in that do not require students to go online or use their smartphones? Do the students enjoy these activities?

During class they should not be using their phone. But, they all WANT to! IN DOUG'S CLASS, FOR EXAMPLE, WHAT PHYSICAL OR PRACTICAL ACTIVITIES DO THE STUDENTS DO?

11. What recommendations would you make about the smartphone use of students at ISM?

You can have it out before school, during your lunch and after school only. THAT SOUNDS VERY FAIR

12. Is there anything that you would like to say regarding things that we have been discussing?

We are ALL addicted to our means of communication (the phone and all the apps) these days.

It is pathetic. We barely converse anymore. Young people are severely lacking in social etiquette because we don't practice that anymore. DO YOU THINK THAT THAT SHOULD PERHAPS BE INCORPORATED IN THE SYLLABUS AS A CLASS, OR DO YOU THINK THAT SOCIETY HAS CHANGED SO MUCH THAT WE ARE ACCEPTING DIFFERENT STANDARDS OR NORMS?

13. Do you have any questions regarding our subject of discussion?

Have you explored the intense PRESSURE to have the latest and greatest phone and gadgets that go with them? Students are adamant that they must have it!

THIS IS A WONDERFUL TOPIC AND I WILL DEFINITELY INCLUDE IT IN MY QUESTIONING. ARE YOU SAYING THAT THE NEW TREND IS FOR FASHION TO HAVE MIGRATED ONTO PHONES RATHER THAN CLOTHING SO MUCH?

APPENDIX N

PROTOCOL AND CORE QUESTIONS FOR FOCUS GROUP DISCUSSION WITH 10+ STUDENTS

Introductory Statement:

Thank you for agreeing to participate in this focus group. As adolescents you are highly valued, essential components of this research since this study seeks to establish the level of smartphone use among adolescents. This group discussion is scheduled to take 45 minutes to an hour, it will be recorded but your names and identifying information will remain anonymous. Your participation in the focus group is voluntary and if you withdraw at any point you will not suffer any repercussions/not be punished.

Having looked at the questions, I am sure you'll agree there are more relevant and important questions and issues to discuss and raise about smartphones. Please add these questions and comments to the Google doc I will share.

Ground Rules:

1. Stay focused on the subject/question
 2. Each participant must contribute a thought about/contribute to each question
3. Look at the question from many angles
4. Keep the momentum of the conversation going
5. Get closure on each question.

Adapted from Dr Kimberly Young's Internet Addiction Test (IAT)

(An online version of Dr Young's test is available at http://www.internetoveruse.com/?p=171)

1. How many phones do you have? What do you need your phone(s) for?

2. How does not having your phone on you make you feel and why do you think this is so?

    How do you feel when your phone is withdrawn from you?
3. What on-line activities absorb most of your time?

    Do you stay on-line longer than you intended on any of them? Why?
4. How often do you family or friends comment or complain about how much time you spend on-line?

5. Have you ever been confronted about the time you spend on-line?

    If yes how did you feel when confronted about the time you spend on-line? How did you defend yourself?
    Has your phone ever been withdrawn from you? By your parents? Teachers?
6. How have you ever tried to limit your smartphone use (at dinner/work/class/when meeting friends)?

    If yes why? Were you successful at it?
7. Have you formed new relationships with fellow on-line users recently and on which sites do you connect socially?

8. What do you find appealing or soothing about going on-line?

9. How do you think your smartphone has influenced your work and/or academic performance?

    Have you ever woken up at night to check your phone?

If yes in what ways have nighttime on-line activities affected your sleep?

10. What negative experiences if any have you had on-line and why do you think this happened?

11. Is there anything that you would like to say regarding things that we have been discussing?

12. Do you have any questions regarding our subject of discussion?

Follow up questions or probes
From the discussions some very useful information, which was not anticipated, will most likely arise. This will be used in follow up questions and expansion at subsequent focus groups.

Closing statement:
Thank you so much for your participation and if any further thoughts bubble up after the session, please make a note of them and forward them to me by phone or e-mail.

APPENDIX O

PARTICIPATION INFORMATION SHEET AND CONSENT: PARENT

February 2020

Dear Prospective Participant I, Jillian Clarke-McLeod am doing research under the supervision of Dr Zenzele Weda, a lecturer in the Department of Educational Foundation in the School of Education at the University of South Africa. I am studying towards a Masters in Comparative Education at the same university. We are inviting you to participate in a study entitled EXPLORING ADOLESCENT SMART PHONE DEPENDENCE. THE CASE OF AN INTERNATIONAL HIGH SCHOOL IN MYANMAR.

The purpose of this study is expected to to explore the issue of adolescent smartphone use. It expected to collect important information that could benefit ISM and other similar schools in optimizing the use of smartphones for the benefit of their students and to deepen the understanding of adolescent smart phone use in general. The study will entail observation of students in classroom and other settings, conducting focus group interviews with students and interviews with members of school staff and parents.

You are invited because as parent to an adolescent you able to give valuable information and opinion about adolescent smartphone use, and also because you are affiliated with the ISM. Your child has already volunteered to participate in the study. You will be expected to take part in an interview where you will give your opinion about adolescent smartphone use. The interview will be face-to-face and will take around 45 minutes. It will be conducted at ISM or any other venue of your choice. The interview will be conducted at a time and day convenient to you. Five members of staff from ISM, ten students and four other parents will participate in the study.

Participating in this study is voluntary and you are under no obligation to consent to participation. If you do decide to take part, you will be given this information sheet to keep and be asked to sign a written consent form. You are free to withdraw at any time and without giving a reason.

As a parent this study could improve your understanding of how to manage the smartphone use of adolescents. It will also benefit schools like ISM to better manage their students' smartphone use for the benefit of their education. Suggestions, recommendations and conclusions of the study could help refine school policies that govern the use of smartphones. This could be beneficial to your child.

Only minor discomfort or inconvenience are expected from this research, thus this research would not pose a risk above the everyday norm. Your name will not be recorded

anywhere, and no one will be able to connect you to the answers you give. Your answers will be given a code number, or a pseudonym and you will be referred to in this way in the data, any publications, or other research reporting methods such as conference proceedings. Your answers may be reviewed by people responsible for making sure that research is done properly, including the transcriber, external coder, and members of the Research Ethics Review Committee. Otherwise, records that identify you will be available only to people working on the study, unless you give permission for other people to see the records. Your anonymous data may however be used for other purposes, such as a research report, journal articles and/or conference proceedings, but your privacy will be protected because individual participants will not be identifiable in such a report.   Hard copies of your answers will be stored by the researcher for a period of three years in a locked cupboard for future research or academic purposes; electronic information will be stored on a password protected computer. Future use of the stored data will be subject to further Research Ethics Review and approval if applicable. Hereafter hard copies will be shredded and digital copies will be permanently deleted from any drives by using relevant software.

There will be no compensation or payment to any participant. This study has received written approval from the Research Ethics Review Committee of the Department of Education, Unisa. A copy of the approval letter can be obtained from the researcher if you so wish.

If you would like to be informed of the final research findings, please contact Jillian Clarke-McLeod on +95 996 427 3547 or email at jmcleod.sev@gmail.com. The findings are accessible for six months after completion of the study.   Should you require any further information or want to contact the researcher about any aspect of this study, please contact Jillian Clarke-McLeod on +95 996 427 3547 or email at jmcleod.sev@gmail.com. All participants will be given a simple document with the results in colloquial English and contact details of the researcher for clarification of any questions. Also, a brief meeting will be scheduled for debriefing participants.

Should you have concerns about the way in which the research has been conducted, you may contact   Jillian ClarkeMcLeod on +95 996 427 3547 or email at jmcleod.sev@gmail.com.

Thank you for taking time to read this information sheet and for participating in this study.

Sincerely _____ Jillian Clarke-McLeod

APPENDIX P

CONSENT FROM: PARENT FOR CHILD TO PARTICIPATE

Dear Parent

Your _____child is invited to participate in a study entitled EXPLORING ADOLESCENT SMART PHONE DEPENDENCE. THE CASE OF AN INTERNATIONAL HIGH SCHOOL IN MYANMAR.

I am undertaking this study as part of my master's research at the University of South Africa. The purpose of the study is to explore the issue of adolescent smartphone use. It is expected to collect important information that could benefit ISM and other similar schools in optimizing the use of smartphones for the benefit of their students and to deepen the understanding of adolescent smart phone use in general. The study will entail conducting focus groups interviews with students, interviews with members of school staff and interview with parents.

As a parent this study could improve your understanding of how to manage the smartphone use of adolescents. It will also benefit schools like ISM to better manage their students' smartphone use for the benefit of their education. Suggestions, recommendations and conclusions of the study could help refine school policies that govern the use of smartphones. This could be beneficial to your child. I am asking permission to include your child in this study because they volunteered and comply with the requirements of the study. I expect to have nine other children participating in the study.

If you allow your child to participate, I shall request him/her to:

- To be subject to observations in class, in the lunch hall and outdoor spaces at school during February, March and April (2020), during which I will make notes for the study about his/her smartphone use and record the answers in a digital audio file.
- Take part in focus group discussions with the other students in the study, answering and discussing questions about smartphone use in a classroom at school during February, March and April (2020). The answers will be recorded in a digital audio file and the discussion is scheduled to last about 45 minutes.

Any information that is obtained in connection with this study and can be identified with your child will remain confidential and will only be disclosed with your permission. His/her responses will not be linked to his/her name or your name or the school's name in any written or verbal report based on this study. Such a report will be used for research purposes only. His/her answers will be given a code number, or a pseudonym and they

will be referred to in this way in the data, any publications, or other research reporting methods such as conference proceedings.

The answers may be reviewed by people responsible for making sure that research is done properly, including the transcriber, external coder, and members of the Research Ethics Review Committee. Otherwise, records that identify your child will be available only to people working on the study, unless you give permission for other people to see the records.

This anonymous data may however be used for other purposes, such as a research report, journal articles and/or conference proceedings, but your child's privacy will be protected because individual participants will not be identifiable in such a report.

There are no foreseeable risks to your child by participating in the study. Your child will receive no direct benefit from participating in the study; however, the possible benefits to education are that we will discover information which will help us improve adolescents' quality of life. Neither your child nor you will receive any type of payment for participating in this study.

Your child's participation in this study is voluntary. Your child may decline to participate or to withdraw from participation at any time. Withdrawal or refusal to participate will not affect him/her in any way. Similarly you can agree to allow your child to be in the study now and change your mind later without any penalty.

The study will take place during regular classroom activities, during lunch and break time as well as in your child's free time. Classroom observations will take place with the prior approval of the school and your child's teacher. There will be no interference with instructional time.

In addition to your permission, your child must agree to participate in the study and you and your child will also be asked to sign the consent and assent forms respectively, which accompany this letter. If your child does not wish to participate in the study, he or she will not be included and there will be no penalty. The information gathered from the study and your child's participation in the study will be stored securely on a password locked computer in my locked office for five years after the study. Thereafter, records will be erased.

If you have questions about this study please ask me or my study supervisor, Dr Zenzele Weda, Department of Educational Foundations, College of Education, University of South Africa. My contact number is +95 996 427 3547 and my e-mail is jmcleod.sev@gmail.com . The e-mail of my supervisor is zenweda@gmail.com. Permission for the study has

already been given by the School Board and the Ethics Committee of the College of Education, UNISA.

You are making a decision about allowing your child to participate in this study. Your signature below indicates that you have read the information provided above and have decided to allow him or her to participate in the study. You may keep a copy of this letter.

Sincerely,

Name of child: _____ Parent/guardian's name (print)_____ Parent/guardian's signature: _____

Date: _____ _____ Researcher's name (print)_____

Researcher's signature_____ Date:_____

APPENDIX Q

STUDENTS IN SECONDARY SCHOOL ASSENT TO PARTICIPATE IN A RESEARCH PROJECT

EXPLORING ADOLESCENT SMART PHONE DEPENDENCE. THE CASE OF AN INTERNATIONAL HIGH SCHOOL IN MYANMAR.

February 2020

Dear _____

I am doing a study on adolescent smartphone use as part of my studies at the University of South Africa. Your principal has given me permission to do this study in your school. I would like to invite you to be a very special part of my study. I am doing this study so that I can find ways that your teachers, counsellors and parents can better help you use and manage technology. This may help you and many other students of your age in different schools.

This letter is to explain to you what I would like you to do. There may be some words you do not know in this letter. You may ask me or any other adult to explain any of these words that you do not know or understand. You may take a copy of this letter home to think about my invitation and talk to your parents about this before you decide if you want to be in this study.

I would like to ask you to discuss topics in a focus group (which is a group focused on discussing certain topics) of ten students. These activities are planned for February, March and April (2020).

I will write a report on the study but I will not use your name in the report or say anything that will let other people know who you are. Participation is voluntary and you do not have to be part of this study if you don't want to take part. If you choose to be in the study, you may stop taking part at any time without penalty. You may tell me if you do not wish to answer any of my questions. No one will blame or criticise you. When I am finished with my study, I shall return to your school to give a short talk about some of the helpful and interesting things I found out in my study. I shall invite you to come and listen to my talk.

By exploring adolescent smartphone use in your school, I expect to collect important information that could benefit ISM and other similar schools. This could improve smartphones use and benefit students by deepening our understanding of adolescent smart phone use in general. It will also benefit schools like ISM to better manage their students' smartphone use for the benefit of their education and to help refine school smartphone policies.

If you decide to be part of my study, you will be asked to sign this form on the bottom of the page. If you have any other questions about this study, you can talk to me or you can have your parent or another adult call me at +95 996 427 3547 or e-mail me at jmcleod.sev@gmail.com . Do not sign the form until you have all your questions answered and understand what I would like you to do.

Researcher: Jillian Clarke-McLeod   Phone number: +95 996 427 3547.

Do not sign the written assent form if you have any questions. Ask your questions first and ensure that someone answers those questions.

WRITTEN ASSENT

I have read this letter which asks me to be part of a study at my school. I have understood the information about my study and I know what I will be asked to do. I am willing to be in the study.
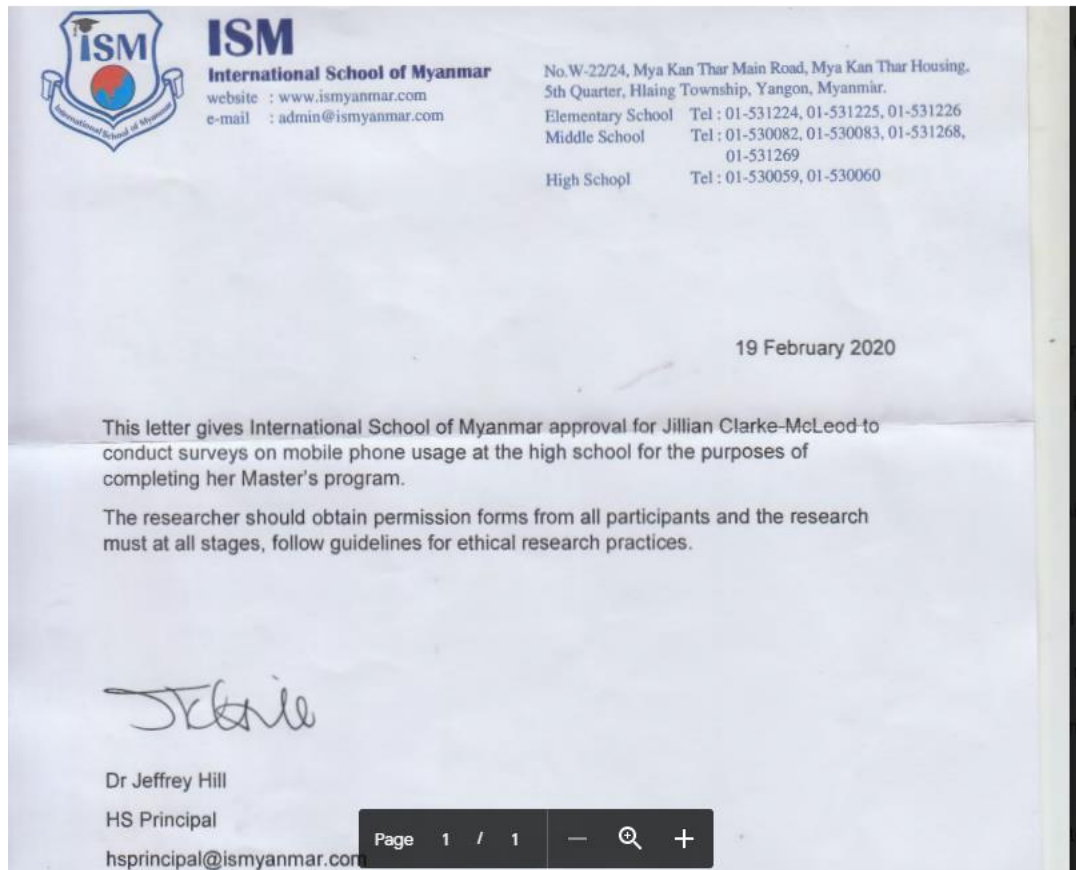
_____   _____

_____ Student's name (print):   Student's signature:

Date:

_____   _____

_____ Witness's name (print)   Witness's signature

Date:

(The witness is over 18 years old and present when signed.)

_____   _____

_____ Parent/guardian's name (print)   Parent/guardian's

signature: Date:

APPENDIX R

ISM

International School of Myanmar

website : www.ismyanmar.com
e-mail : admin@ismyanmar.com

No.W-22/24, Mya Kan Thar Main Road, Mya Kan Thar Housing,
5th Quarter, Hlaing Township, Yangon, Myanmar.

Elementary School Tel : 01-531224, 01-531225, 01-531226
Middle School   Tel : 01-530082, 01-530083, 01-531268,
                             01-531269
High School   Tel : 01-530059, 01-530060

19 February 2020

This letter gives International School of Myanmar approval for Jillian Clarke-McLeod to conduct surveys on mobile phone usage at the high school for the purposes of completing her Master's program.

The researcher should obtain permission forms from all participants and the research must at all stages, follow guidelines for ethical research practices.

Dr Jeffrey Hill
HS Principal
hsprincipal@ismyanmar.com

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APPENDIX S
Turitin Report

Preparing download... ✕

Exploring Adolescent Smartphone Dependence.
The Case of an International High School in Myanmar.

by

JILLIAN CLARKE-MCLEOD

1
Submitted in accordance with the requirements for the degree of

MASTER OF EDUCATION