



**Digital Practices at Home and School:  
A Case Study Approach**

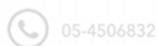
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Doctor of Philosophy

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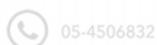


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The study illustrates children's digital practices in the Malaysian context. The 21st century has witnessed an unprecedented expansion of and access to information for people who can use technology. Nowadays, information can be reached in the blink of an eye and is accessible at our fingertips. Since the 1990s, the internet revolution has helped people to search for information through their networked computers, and mobile gadgets have more recently made this even easier as people can carry information in their own pockets. However, this steady increase in internet usage and mobile device ownership, particularly among schoolchildren in Malaysia over the last few years, has been creating fear, anxiety and frustration. Due to a moral panic in Malaysia regarding children's online safety, to date the majority of the extant studies carried out in Malaysia are focusing on E-Safety instead of seeking a deeper understanding of the current digital practices among Malaysian children. Little research has been conducted to specifically investigate and understand the online experience dimensions of Malaysian children's lives and social worlds. This descriptive case-study based research explores a small group of Malaysian children's digital practices and their management in the school (computer lab) and at home, and in both the communal area and personal spaces of the latter. This research examines five 16 year olds' engagements with online technology across formal and informal settings at school and at home using a mixed methods approach, specifically questionnaires, interviews, observations and focus group discussion. The findings reveal that participating children enjoy online benefits through a range of online activities with the usage of several digital devices. This study also provides insights into the roles and influences of parental, teacher, older siblings and peer mediation in developing children's digital literacy skills. Furthermore, children's perceptions of online opportunities and risks, and what kind of learning is involved through their online activities are also analysed and discussed.

Kajian kes ini dilaksanakan bertujuan untuk menggambarkan amalan digital semasa kanak-kanak Malaysia. Abad ke-21 telah menyaksikan perkembangan pesat dan perubahan mendadak dalam dunia teknologi menjadikan maklumat kini dapat dicapai melalui hujung jari sahaja. Sejak tahun 1990-an, revolusi internet telah membantu kita melayari alam maya melalui rangkaian komputer tetapi kini dengan berkembangnya kemajuan teknologi peranti mudah alih pengguna dapat menggunakan internet pada bila-bila masa. Walau bagaimanapun, peningkatan penggunaan internet dan pemilikan peranti mudah alih dalam kalangan pelajar sekolah di Malaysia dalam beberapa tahun kebelakangan ini telah mewujudkan kerisauan dan kebimbangan kepada semua pihak. Ini sekaligus mencetuskan panik di Malaysia mengenai keselamatan kanak-kanak dalam alam maya dan sehingga kini, majoriti kajian yang telah dijalankan di Malaysia lebih memberi tumpuan kepada Keselamatan Siber berbanding kajian yang bertujuan mengkaji lebih mendalam mengenai amalan digital semasa dalam kalangan kanak-kanak Malaysia.

Justeru itu, kajian ini telah dijalankan untuk mengkaji dan memahami dimensi keseluruhan serta mendalam pengalaman kanak-kanak di Malaysia dalam dunia maya. Kajian deskriptif ini meneroka amalan digital sekumpulan kecil kanak-kanak Malaysia dan pengurusan amalan digital di sekolah (makmal komputer) dan juga di rumah. Kajian ini juga menyelami amalan digital lima peserta kanak-kanak yang berusia 16 tahun dengan menggunakan pendekatan kaedah campuran (kuantitatif dan kualitatif) menerusi soal selidik, temu bual, pemerhatian dan kumpulan fokus. Hasil kajian menunjukkan bahawa kanak-kanak yang terlibat menikmati manfaat internet melalui pelbagai jenis aktiviti dalam talian dengan penggunaan beberapa peranti digital secara positif. Selain itu, hasil kajian jugak menunjukkan bahawa peranan dan pengaruh ibu bapa, guru, adik-beradik yang lebih tua dan penglibatan rakan sebaya dalam aktiviti alam maya memberi pengaruh kepada perkembangan kemahiran literasi digital seseorang kanak-kanak itu. Selain yang dinyatakan di atas, persepsi kanak-kanak terhadap kebaikan dan keburukan (ancaman) internet, berserta jenis pembelajaran yang terlibat melalui aktiviti atas talian juga dianalisa dan dibincangkan.

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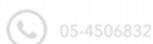
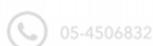
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# CHAPTER 1

## INTRODUCTION

### 1.1 Introduction

The steady increase in the level of internet usage and mobile device ownership particularly among schoolchildren in Malaysia over the last few years has apparently created fear, anxiety and frustration (Abdul Shukor, 2006; Hassan & Raja Abdul Rashid, 2012, UNICEF Malaysia, 2014). In response, the Malaysian Education Ministry carried out three large national surveys focusing on school-age children and E-safety in 2013, 2014 and 2015 (Ministry of Education Malaysia, 2013, 2014, 2015a). The resultant reports highlighted concern regarding children's ability and capacity to gain from the benefits of the internet whilst at the same time avoiding harm, and have contributed to the debate leading to the introduction of the CyberSafety program in Malaysian schools. These national survey reports were produced based on data from self-completed questionnaires that were distributed to all states and involved 41,875 children between 7 and 19 years of age. However, whilst impressive in scale, these studies were undertaken using quantitative methods, with the result that the reports are based on generalisations projected onto the entire Malaysian children population. While quantitative data clearly has proven use, qualitative data can illuminate detail and uncover a richer picture, something this thesis aims to provide.

According to the best practice guidance produced by the EU Online Kids network, an organisation involved in carrying out research on European children



and their uses of online technologies since 2006, there is a critical need to explore

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this area through the adoption of qualitative research methods: we need to understand the nature of children's digital practices by examining the meanings, motives, reasons and patterns of their online activities in order to determine and provide insight into their online world (Lobe, Livingstone, Olafsson & Simoes, 2008; Olafsson, Livingstone & Haddon, 2013a). As will be detailed in the following chapters, I have found that a qualitative exploration of the children's practices and viewpoints, can reveal that young people in Malaysia are in many ways better informed, more strategic and more knowledgeable than the quantitative study carried out by the government suggests. However, the picture that emerged from my research was rich and complex.

Based on the reports by the Ministry of Education Malaysia (ibid), my initial research interest focused on investigating E-Safety. My interest was piqued by wider media discourses for E-Safety in Malaysia and then deepened during my teaching career; like many other educators, I had the impression that young people were constantly in danger online. However, throughout the course of my research journey, I made a dramatic shift in position, as I saw the participating Malaysian children's digital practices in my study not as dangerous, but as creative and rich; their online opportunities helped them manage all kinds of aspects of their lives, their families' lives, and to gain more from their school curriculum. I saw how they were able to bring benefit from school practices to home, and vice versa. This study also provided me with a broader understanding of digital literacy as I shifted my point of view concerning literacy concepts; I began to see digital literacy as increasingly being about *social practices* as opposed to just skills based activities.

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My research sought to fill a gap in extant research in Malaysia by providing a deeper understanding of what children are doing online, and what they already know, and what they need to know, to make the best of online opportunities, in order to provide information to relevant stakeholders, including the Malaysian Ministry of Education, teachers and parents (UNICEF Malaysia, 2014). I wanted to inform stake holders about the positive benefits of young peoples' online practices. The research questions were derived from the literature review; based on my reading, no other qualitative research appears to have been carried out in Malaysia on this issue. As such, this research adopted a mixed-method approach: qualitative approaches, including interviews, focus groups and observation, combined with a quantitative approach using questionnaires. The mixed-method approach is recognised as being very helpful in interpreting data when studying children and online technologies and led to my deeper understanding of digital literacy as a social practice, as well as being about gaining specific technological skills. Further, mixed methods are recognised as good practice in researching children's digital literacy experiences (Olafsson, Livingstone & Haddon, 2013b).

## 1.2 Research Background

The 21<sup>st</sup> century has witnessed an unprecedented expansion of, and access to, information for people who can use technology (Choi, Glassman & Cristol, 2017; Halverson & Shapiro, 2012). Nowadays, information can be reached in the blink of an eye and is quickly at our fingertips. Since the 1990s, the internet revolution has helped people to search for information through their networked computers, and mobile gadgets have more recently made this even easier as people can carry

information in their own pockets (Calvo-Porrá, Faiña-Medín & Nieto-Mengotti, 2017; Lenhart, 2015).

The free flow of information in today's technologically rich environment clearly has implications for learning in both formal and informal situations. Formal learning here is defined as classroom settings, where teachers give direction and instruction to students through an Information Communication and Technology (ICT) curriculum; while informal learning is defined by any situation outside school hours which may include self-learning and guidance from parents and peers. This is in line with Tapscott (2009, p.18) who states that for the new generation is one of active internet user for whom "...using the new technology is as natural as breathing". In other words, the assertion is that they have grown up as digital citizens. Previous research by Arafeh and Levin (2003); Katyal and Evers (2004), and Prensky (2001, 2005) also show that children have immersed themselves as digital learners and are naturally skillful in using online technologies in daily life. However, such research findings contrast with Kolikant (2010) who rejects the idea of digital natives, those naturally born as better learners. Instead, he argues that the digital citizen is not all about digital skills and usage but should also focus on how children nowadays engage with new technologies. Kolikant believes that even though younger generations are born in this 'digital world', it does not mean that they are better digital citizens than others; this is in line with arguments by Bennett, Maton and Kervin (2008) and Selwyn (2009). Vincent (2015) argues that by investigating and exploring children's digital literacy experiences, it will provide information on the ways to prepare and develop the future generation in order to

transform children as advisors, children as explorers, children as problem-solvers



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and children as sharers.

### 1.3 Research Focus

The main focus of this research has been to understand Malaysian children's online digital practices, experiences and their management at home and school. I wanted to get a nuanced picture of their practices, perceptions and understandings. To obtain a comprehensive picture of their practices, perceptions and understandings of their online digital practices, I therefore carried out this case study. Specifically, I looked at young people's digital access and use; their online activities and experiences; their teachers, and parental mediation – the role parents play in guiding or shaping their children's digital practices. This research also discusses the relationship between opportunities and risks while online.



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This research is significant because it is different from any other research involving children and online technologies in Malaysia because it included qualitative approaches through the use of interviews, focus group and ethnographic observations at home and school. Further, this approach offers a more complete and richer understanding and analysis compared to any other research that has been carried out in Malaysia which has collected data through only quantitative methods (e.g. self-completed questionnaires) focusing on E-Safety and on other research that, although including the use interviews to obtain qualitative research, focused more on social media and gaming experience (Ministry of Education Malaysia, 2013, 2014; UNICEF Malaysia, 2014).



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At the same time, this research is also relevant and valuable because it aimed to provide in-depth findings in the Malaysian-specific context as to what are the current online digital literacy experiences amongst Malaysian 16-year old children; whether Malaysian children use online technology in the same ways or differently in comparison to other children in other countries, or at least within the South East Asian countries. This requires answering due to previous research showing that some children in different countries use technology differently due to contextual differences in culture and society (Grant, 2010; Jones & Lea, 2008; Lea & Jones, 2011; Martínez de Morentin, Cortés, Medrano, & Apodaca, 2014; Lemphane & Prinsloo, 2014; UNICEF Malaysia, 2014).

To reiterate, as discussed above, there have been studies of children and their use of online technologies by Malaysian researchers in educational contexts.

The majority of such research was carried out with a focus on E Safety (Abdul Shukor, 2006; Baharuddin & Zakaria, 2009; Balakrishnan, 2015; Ministry of Education Malaysia, 2013, 2014; Shin & Ismail, 2014; Teimouri et al., 2014; UNICEF Malaysia, 2014), and few focusing beyond scratching the surface of children's digital skills. However, to date, no research has been conducted to specifically investigate and understand the meaning and online experience dimensions of Malaysian children's lives and social worlds, and my research has been worthwhile in this respect, revealing some cultural differences in my Malaysian participants' practices.

Moreover, a better understanding of how Malaysian children use online technologies in the classroom and home was garnered from this research, which included children's digital practices and experiences through investigating their

online access and use, online activities, digital literacy skills, and parental mediation. This understanding, derived from my research, could result in more effective steps to help them make the most of their online opportunities in nurturing a better life in the future. As such, the Malaysian reports also addressed the concerns of Malaysian children who were found to be worried and very concerned about their own online safety (see the Literature Review chapter - below); I have therefore made suggestions in Chapter 6 on how to help them to become more confident and motivated in the 'digital world'. As I also outline later, the outcome of my research also provided information about Malaysian children's digital practices, which could benefit teachers and parents to better understand how Malaysian children embed online technologies in their lives. It also could be used to generate questions and suggestions for teachers and parents in supporting responsible and creative uses of digital technologies at school and at home.

#### 1.4 Aims and Objectives

This descriptive case-study research approach seeks to explore Malaysian children's digital practices and their management in the school's computer lab and at home, in both communal areas and personal spaces. This research attempted to understand 16-year old children's engagement with online technology, their perceptions of online opportunities and risks, and what kind of learning is involved through their online activities across formal and informal settings at school and at home. This research aimed to describe Malaysian's children current online digital practices in order to help them make the most of their online opportunities.

- To observe what Malaysian children do when they go online and compare their online activities at home and school.
- To describe Malaysian children's online digital practices through their use and access, digital literacy skills, parent and teacher mediation and their online experiences.
- To investigate Malaysian children's perceptions about online opportunities and online risks.
- To identify what kinds of online opportunities Malaysian children take-up while going online.

## 1.5 Research Questions

This research sought to answer the following questions, with the aim of assessing what school children do when using the internet and what role schools can play in supporting their development:

1. What do Malaysian children do online at home and in school?
2. What do Malaysian children see as the opportunities and risks offered by the internet?
3. What learning are Malaysian children involved in through their online activities?

The research questions were formulated based on the literature review (see Chapter 2 – Literature Review). In the next section, I present the context of the study,

Malaysia as a developing country, and provide a description of the current education system in Malaysia.

## 1.6 Context of the Study

This section sets out the context of the study in order to establish and clarify the context of the research background. By providing information about Malaysia, this facilitated both the research design and informed the way in which the research was conducted. As such, this section begins with a brief modern history of Malaysia as a developing country, before describing its current educational system.

### 1.6.1 Malaysia as a Developing Country

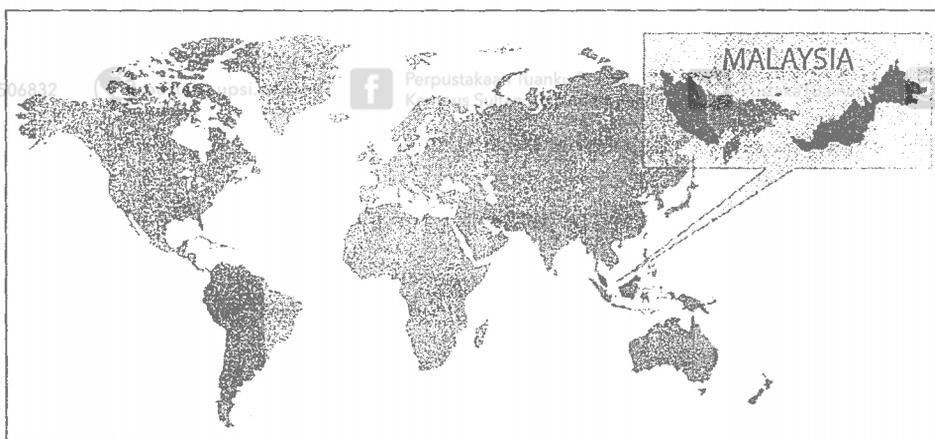
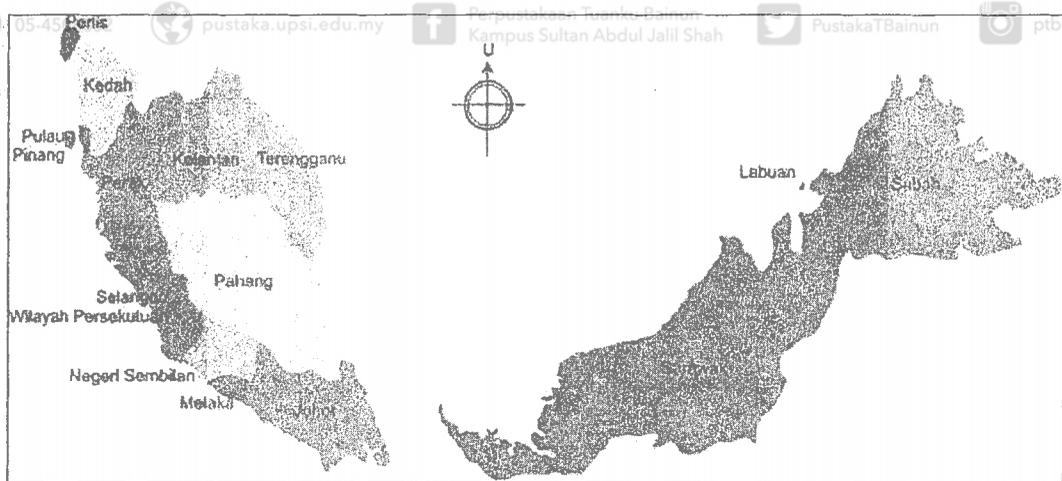


Figure 1.1: Malaysia on the world map (Source: Global Village, 2016)

Malaysia is a federal constitutional monarchy which practices parliamentary democracy. Malaysia achieved independence on the 31<sup>st</sup> of August 1957 from the British Empire. Under the influence of British colonisation, the structure of the governmental system is slightly approximate to the Westminster parliamentary

system. Yang Dipertuan Agong (His Majesty the King) is the head of the state while the head of the government is the Prime Minister (Parliament of Malaysia, 2015).

Located in Southeast Asia, it consists of 13 states (see Figure 1.2) and 3 federal territories. Geographically, Malaysia is 329,847 square kilometres in size and is separated into two parts - Peninsular Malaysia and East Malaysia - by the South China Sea (Tourism Malaysia, 2014). Although Islam is the official or state-recognised religion, citizens are guaranteed freedom of religion as Malaysia is a multi-ethnic and multi-cultural country. The official language is Malay (Parliament of Malaysia, 2015). Malaysia's population, as of October 2014, is estimated to be 30 million with the three largest ethnic groups consisting of Malay, Chinese and Indian (Tourism Malaysia, 2014).



**Figure 1.2:** Maps of Malaysia (Source: Office of The Prime Minister of Malaysia, 2017)

Malaysia is a country that looks out to the world and invites global investment (Malaysian Investment Development Authority, 2015; Ministry of Education Malaysia [MOE], 2017; Yi, Shaohui & Xiaolang, 2010). Economic

revenues mostly derive from the country's natural resources. However, it has been expanding into other sectors such as science, commerce and tourism, including medical tourism. The Tourist Board proudly identifies Malaysia as a newly industrialised country, the 3<sup>rd</sup> largest in Southeast Asia and ranked the 29<sup>th</sup> largest in the world (Tourism Malaysia, 2014). Since independence, Malaysia has been held up as an example of a successful developing country, being one of 13 countries identified by the Commission on Growth and Development as having recorded robust growth in private investment, which has expanded at a compound annual growth rate of 13.9 per cent since 2010 (Performance Management and Delivery Unit, 2015; Tourism Malaysia, 2014). Malaysia is also currently in the process of developing its education system Ministry of Education Malaysia [MOE] (2017). Of relevance, the research conducted here is funded as a part of this development process (Ministry of Education Malaysia, 2015b).

### 1.6.2 The Education System in Malaysia

The education system consists of five stages: preschool, primary school, secondary school, post-secondary school and tertiary education. There are approximately 2.7 million enrolled primary students and 2.2 million enrolled secondary students currently studying in 7,772 primary and 2,408 secondary schools throughout the entire country, respectively (Ministry of Education Malaysia, 2015c).

Normally at 5 years of age children attend preschool for 2 years. There is no formal curriculum, but the principal and teachers need to undergo formal training and are required to obtain the relevant certification approved by the government in order to run the preschool. Compared to preschool, which is based

on parental choice, primary education, lasting for 6 years is compulsory to all children and begins at the age of 7 (with these years being referred to as Year 1 to Year 6). Before progressing to secondary education, students need to take the Primary School Achievement Test (UPSR), consisting of the following five subjects: Malay (Comprehension), Malay (Writing), English (Comprehension), English (Writing) and Mathematics.

At the age of 13, Malaysian children commence secondary education, which lasts for five years (referred to as Form 1 to Form 5). They sit for the Form Three Assessment (PT3) at the end of Form 3 in the following subjects: Malay language (Bahasa Malaysia), English, Mathematics, Science, Geography, History, Living Skills and Islamic Studies (optional for Non-Muslims). Based on their PT3 result and their own choice, they can choose to enter the Science stream or Arts stream for the next school year (Form 4). At the end of Form 5, students are required to sit the Malaysia Certificate of Education (SPM). Based upon the old 'British School Certificate', the SPM General Certificate of Education GCE is equivalent to the former O-Level qualification level.

After the SPM, students then have the choice of either studying in Form 6 for the Malaysian Higher School Certificate (STPM, internationally recognised), the Matriculation (pre-university, only valid for attending university in Malaysia) or they may opt for pre-university studies in private colleges to obtain the relevant qualifications necessary to meet the Higher Education entrance requirements.

Currently, there are 7,772 primary schools, 2,408 secondary schools, 30 public universities, 30 public polytechnics, 97 public colleges/institutions, 25 private universities, 25 private university colleges, and 25 private

colleges/institutions in Malaysia. While primary and secondary education are free, and tertiary education in Malaysia is still heavily subsidised by the Malaysian



government. On 1<sup>st</sup> July 1997, the government launched The National Higher Education Fund Corporation (PTPTN), a study loan scheme, which was set up to help students pay their tuition fees and their monthly expenses during their study period. Furthermore, students who pass their degree with flying colours, are exempted from the repayment of their loan; their excellent academic performance being converted as a form of scholarship.

In conclusion, Malaysia has not only inherited the educational system and government structure of its colonial ruler, but it has also embedded a thread of Malaysian Islamic culture embedded throughout. This might imply why it is that the findings in Malaysia may have similarities to, but at the same time, slightly vary



from findings in the UK.

The next section sets out the structure of the thesis.

## 1.7 Structure of the Thesis

In this section, I provide an outline of my thesis which has adopted a descriptive case-study approach. The overall structure of this thesis takes the form of six chapters, including this introductory chapter.

1. Chapter 1 (Introduction): this chapter highlights the research focus and provides an outline of the research area. It also includes the context of the study, which presents an overview of Malaysia as a developing country and sets out a brief background of its educational system.



2. Chapter 2 (Literature review): this chapter comprises the relevant literature of the research area to ensure both the relevance and value of my research as well as to address and formulate the research questions.

3. Chapter 3 (Methodology): this chapter includes the methodological approach, participants' selection process, data collection for data gathering, data analysis techniques and ethical considerations.

4. Chapter 4 (Analysis and Findings): this chapter presents the analysis of interviews and observations undertaken during school and home visits.

5. Chapter 5 (Discussions): this chapter draws a discussion from the entire data findings and is focused on answering the three research questions.

6. Conclusion: this chapter sets out the discussion of the implications of the findings for future research into this area, a critique of the findings and a

summary of the research.