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ROLE OF PARENT MEDIATION IN CHILDREN'S POSITIVE USE OF THE INTERNET

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Abstract of thesis presented to the Senate of Universiti Putra Malaysia, in fulfillment of the requirements for the degree of Doctor of Philosophy

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June 2015

Chairperson: Associate Professor Siti Zobidah Omar, PhD
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The Internet places the whole world at children's fingertips. Children communicate through the Internet, learn through the Internet, and are entertained by the Internet. The Internet brings a lot of opportunities to children; however, if their usage is not managed properly, the Internet can also expose children to risk. This study examines how parents' roles – in terms of parental mediation (PM) and parental cultural capital (PCC) – can increase the benefits experienced by children who use the Internet.

By using four constructs of parental mediation theory (active co-use, interaction restrictions, technical restrictions and monitoring) and two constructs of parental cultural capital theory (attitudes and activities), this study attempts to examine the causal effects of these constructs on children's positive use (CPU) of the Internet by measuring six dimensions, namely information, communication, entertainment, participation, creativity and expression. This study also looks at the effect of gender moderation, which can alter the strength of causal relationship between the independent variables (PM and PCC) and the dependent variable (CPU of the Internet).

The data for this study were collected from 384 schoolchildren aged 9 to 16 years (excluding those aged 12, 15 and 17 due to the fact that they were undertaking the Primary School Evalution Test (UPSR), Lower Secondary Assessment (PMR) and the Malaysian Certificate of Education (SPM) at the time of the study) and 384 parents/guardians in Selangor, Malaysia. Stratified sampling was employed to obtain the sample. Classroom-administered questionnaires were used to collect the data from the schoolchildren, while self-administered questionnaires were used to collect the data from the parents/guardians.

Using structural equation modeling Amos, the results from the path analysis reveal that the PM techniques of “active co-use” and “interaction restrictions” have a significant negative relationship with CPU of the Internet; “technical restrictions”, on the other hand, has a significant positive relationship with CPU of the Internet; meanwhile, “monitoring” has no significant relationship with CPU of the Internet. PCC‘s “attitudes” and “activities” also has no significant relationship with CPU of the Internet. Children’s gender moderated the causal effect of “active co-use”, “interaction restrictions” and “technical restrictions” on CPU of the Internet.

In conclusion, PM through “technical restrictions” seems to be a better strategy in promoting CPU of the Internet in Malaysia. Based on the findings of this study, it is recommended that parents pay greater attention to the “technical restrictions” mediation strategy and keep abreast of Internet technologies in order to understand the latest technologies, which will in turn enable them to better filter and monitor their children’s online activities and, ultimately, increase children’s opportunities. PM techniques such as discussing with children the positive and negative aspects of the Internet, remaining nearby while children are online, and restricting children’s activities online are not enough to keep children safe from the risks they are exposed to while using the Internet.

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi sebahagian keperluan untuk ijazah Doktor Falsafah

PERANAN MEDIASI IBUBAPA DALAM MENENTUKAN BAGAIMANA ANAK-ANAK MENGUNAKAN INTERNET SECARA POSITIF

Oleh

AZLINA BINTI DAUD

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Internet adalah segala-galanya untuk kanak-kanak. Mereka mengunakan Internet untuk berkomunikasi, pembelajaran dan juga bagi mengisi waktu lapang mereka. Media baru ini membuka banyak peluang untuk kanak-kanak, tetapi jika penggunaan Internet ini tidak diurus dengan betul, ia juga boleh membawa bahaya kepada kanak-kanak. Kajian ini melihat bagaimana peranan ibu bapa/penjaga dapat meningkatkan penggunaan Internet secara positif oleh kanak-kanak. Peranan ibu bapa/penjaga dilihat dari segi mediasi yang digunakan oleh mereka dan "*cultural capital"* yang ada pada mereka.

Dengan menggunakan empat konstruk daripada Teori Mediasi Ibu Bapa (iaitu "penggunaan bersama secara aktif", "sekatan interaksi", "sekatan teknikal" dan "pemantauan") dan dua konstruk daripada Teori *"Cultural Capital"* ibu bapa (iaitu "sikap" dan "aktiviti"), kajian ini cuba melihat kepada kesan hubungan konstruk-konstruk ini terhadap penggunaan Internet secara positif oleh kanak-kanak. Penggunaan Internet secara positif oleh kanak-kanak diukur melalui enam dimensi penggunaan iaitu untuk mendapatkan informasi, komunikasi, hiburan, penyertaan dalam komuniti, kreativiti dan ekspresi. Kajian ini juga melihat bagaimana pengaruh jantina dapat menyederhanakan kekuatan hubungan sebab akibat antara pembolehubah bebas (mediasi ibu bapa dan *"cultural capital"* ibu bapa) dan pembolehubah bersandar (penggunaan Internet secara positif oleh kanak-kanak).

Data untuk kajian ini dikumpulkan daripada 384 pelajar sekolah berumur 9 hingga 16 tahun *[umur 12, 15 dan 17 tahun tidak terlibat dalam kajian ini kerana mereka terlibat dalam peperiksaan Ujian Penilaian Sekolah Rendah (UPSR), peperiksaan Penilaian Menengah Rendah (PMR) dan peperiksaan Sijil Pelajaran Malaysia (SPM) dan tidak boleh diganggu]* dan 384 ibu bapa/penjaga di Selangor, Malaysia. Persampelan berstrata telah digunakan

untuk mendapatkan sampel. Borang soal selidik telah digunakan untuk mengumpul data daripada pelajar sekolah dan ibu bapa/penjaga mereka.

Data kajian ini dianalisis menggunakan "*Structural Equation Modelling"* (SEM) Amos. Hasil kajian ini mendapati mediasi ibu bapa mengunakan konstruk "penggunaan bersama secara aktif" dan "sekatan interaksi" mempunyai hubungan negatif yang signifikan dengan penggunaan Internet secara positif oleh kanak-kanak; "sekatan teknikal" mempunyai hubungan positif yang signifikan dengan penggunaan Internet secara positif oleh kanak-kanak; sementara itu "pemantauan" tidak mempunyai hubungan yang signifikan dengan penggunaan Internet secara positif oleh kanak-kanak. Konstruk *"Cultural Capital"* ibu bapa iaitu "sikap" dan "aktiviti" juga tidak mempunyai hubungan yang signifikan dengan penggunaan Internet secara positif oleh kanak-kanak. Jantina kanak-kanak mempunyai pengaruh penyederhanaan sebab dan akibat terhadap perhubungan antara konstruk "penggunaan bersama secara aktif" dengan penggunaan Internet secara positif oleh kanak-kanak; terhadap perhubungan antara konstruk "sekatan interaksi" dengan penggunaan Internet secara positif oleh kanak-kanak dan terhadap perhubungan antara konstruk "sekatan teknikal" dengan penggunaan Internet secara positif oleh kanak-kanak.

Kesimpulannya, peranan ibu bapa dengan mengunakan teknik mediasi "sekatan teknikal" mampu menggalakkan penggunaan Internet secara positif oleh kanak-kanak di Malaysia. Dalam usaha untuk meningkatkan penggunaan Internet secara positif oleh kanak-kanak, ibu bapa/penjaga perlu meletakkan perhatian yang lebih kepada strategi "sekatan teknikal". Ibu bapa/penjaga perlu sentiasa mengikuti perkembangan media baru ini untuk mengetahui teknologi terkini bagi tujuan penapisan dan pemantauan. Jika kita bercakap mengenai Internet, iaitu kebaikan dan keburukannya kepada kanak-kanak, apa yang penting adalah ibu bapa/penjaga haruslah lebih pro-aktif. Duduk bersama semasa anak-anak melayari Internet dan menyekat aktiviti-aktiviti dalam talian mereka tidak mencukupi untuk memastikan keselamatan *"cyber"* mereka.

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I certify that a Thesis Examination Committee has met on 19 June 2015 to conduct the final examination of Azlina binti Daud on her thesis entitled "Parents' mediation role in children's positive use of the Internet" in accordance with the Universities and University College Act 1971 and the Constitution of the Universiti Putra Malaysia[P.U.(A) 106] 15 March 1998. The committee recommends that the student be awarded the Doctor of Philosophy.

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This is to confirm that:

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

AVE	Average Variance Extracted
CFA	Confirmatory Factor Analysis
CFI	Comparative Fit Index
CPU	Children's Positive Use
CR	Construct Reliability
C/T/M	Concert, Theatre and Movie
DF	Degree of Freedom
DV	Dependent Variable
EU	European Union
FB	Facebook
GOF	Goodness-of-Fit
ICT	Information and Communication Technology
IFI	Incremental Fit Index
IM	Instant Messaging
ITU	International Telecommunication Union
IV	Independent Variable
KKMM	Communication and Multimedia Ministry
KPWKM	Women, Family and Community Development Ministry
M	Mean
MCMC	Malaysian Communications and Multimedia Commission
MOE	Ministry of Education
MOSTI	Ministri of Science, Technology and Innovation
O.M	Overall Mean
O.SD	Overall SD

PCC	Parental Cultural Capital
PM	Parental Mediation
PMT	Parental Mediation Theory
PMR	Lower Secondary Assessment
R^2	Square Multiple Correlations
RMSEA	Root Mean Square Error of Approximation
RUGS	Research University Grant Scheme
SD	Standard Deviation
SEM	Structural Equation Modeling
SES	Social Economic Status
SK	Primary School
SMK	Secondary School
SNSs	Social Networking Sites
SPM	Malaysian Certificate of Education
Std.	Standardized
TLI	Tucker Lewis Index
UK	United Kingdom
UPSR	Primary School Evalution Test
χ^2	Chi-square
YT	YouTube

CHAPTER 1

INTRODUCTION

This chapter describes the background of the study wherein children's positive use (CPU) of the Internet, parental mediation (PM), parental cultural capital (PCC) and gender effect are explained. The problem statement, research question and research objective are also described in this chapter.

Background of the Study

The Internet and other online technologies provide children with a wide range of positive uses, opportunities or benefits. Metaphorically, the Internet is like "heaven with stars", "an infinite space", "global information network", "an ocean of information where everyone may fish", or "a big library in the corner of one's own home" (Savoleinan & Kari, 2004). The Internet has had a huge impact on children's access to information, education and entertainment. The Internet can enrich children's school-based learning and can be a vehicle for sharing creative and intellectual work with others, and as well as introduce them to potentially valuable pastimes.

How can one tell which Internet usages are positive for children? "Children, like adults, are difficult to predict in what may benefit them, for much depends on the interpretative contexts of use, and these are as heterogeneous for children as for any other population" (Livingstone, 2009a). When talking about positive uses of the Internet in relation to children, it is in the hope of maximizing the opportunities of it for them. The positive uses of the Internet are principally recognized as being when children use the Internet to gain knowledge and skills, especially if they tap into the burgeoning supply of age-appropriate activities that help them learn independently and allow them to interact with people around the globe (Izenberg & Lieberman, 1998; Sorbring & Lundin, 2012).

According to Kalmus, Pruulmann-Vengerfeldt, Runnel and Siibak (2009b), CPU of the Internet can be theoretically contextualized by the notion of structure and agency. Structure refers to availability, which includes parents' guidance, rules, broadband connection, a child's own computer and time spent online. Meanwhile, agency refers to the capability of children to use the Internet, which includes freedom, motivation, will, choice, creativity, initiative, etc. The ways in which children positively use the Internet depend on their availability and capability towards the technology. If supported by both availability and capability, children will gain a lot from the technology. Based on this theory, Kalmus et al. (2009b) devised four patterns of CPU of the Internet: **school-favoured** uses, **popular** uses, **resource-bound** uses and **advanced** uses. "**School-favoured"** uses centres on information seeking and educational use; most children take up these opportunities because both availability and capability support this usage. "**Popular uses"** is related to communication and

entertainment; in Europe, only 60–70% of children avail of these opportunities. Although these activities are favoured the most among children who use the Internet, they are controlled by parents and guardians in terms of availability. **Resource-bound uses** are related to communication and entertainment, which include watching videos, movies, television programmes, and playing online games. Slightly more than 50% of children in Europe engage in these activities. Parents or adults in general may perceive these activities as being a waste of time, but for children it is motivational (Granic, Lobel & Engels, 2013; Schifter, 2013). "**Advanced uses"** refers to a range of interactive and creative activities such as online purchasing, blogging and making websites. These are practised by less than 50% of children in Europe because these activities require strong availability and capability, for example good Internet skills and a good Internet connection.

Scholars have measured positive uses of the Internet by looking at children's activities online, which can be classified as follows: **1) content-based activities,** such as completing schoolwork, playing games, watching video clips, reading news or downloading music; **2) contact/communication-based activities,** such as instant messaging (IM), email, chatting or using Skype; and **3) conduct/peer participation activities,** such as blogging, posting photos or using file-sharing sites (Kalmus et al., 2009b; Livingstone & Haddon, 2009; Livingstone & Helsper, 2010; Paus-Hasebrink, Wijnen & Jadin, 2010; Pruulmann-Vengerfeldt & Runnel, 2012).

The perception of positive uses defined by children and by parents are different. Positive uses of the Internet as perceived by children themselves are that it can be used as an educational resource; for social networking and entertainment; and games. All the aforementioned are ways of deriving "fun". Meanwhile, the positive uses of the Internet as perceived by parents are access to global information, educational resources, entertainment and sharing experiences with others around the world (Wold, Hagen & Staksrud, 2006). However, the most common agreement between parents and children about the measurement of positive uses of the Internet is based on the activities of children that involve access to information, communication, entertainment, participation in civic society, creativity, and expression (Wold et al., 2006; Hasebrink, Livingstone & Haddon, 2008; Lenhart, Purcell, Smith & Zickuhr, 2010; Livingstone & Helsper, 2010; Eynon & Malmberg, 2011; Livingstone, Haddon, Gorzig & Olafsson, 2011).

Consideration of these positive uses has led parents, schools, and governments to invest in information and communication technology (ICT) facilities and infrastructure in a bid to enable them to expand children's horizons and have a better chance in life (Livingstone & Bober, 2005a; Buckingham, 2006). However, along with all the positives the Internet brings, there are also negatives, such as the risk of being victimised by bullies, racists, cheats and sexual predators. However, while previous research findings reveal that the more that children use the Internet, the more opportunities they will enjoy, scholars have also found that: "the more children use the Internet, the more they will encounter risks" (Livingstone & Bober, 2005a; Livingstone & Bober, 2005b; Hargittai, 2007).

While being bullied online is the risk that upsets children themselves the most, the public is more concerned by the risk of children meeting up in person with people that they first met online (Livingstone et al., 2011). However there are other, newer risks to children that the public should be concerned about, namely websites, blogs and forums related hate, pro-anorexia, self-harm, drugs and suicide (Livingstone et al., 2011). In the past year, 12% of European children aged 11 to 16 years have visited a hate site; 10% have visited a pro-anorexic site; 7% have visited self-harm site; 7% have visited a drug site; and 5% have visited a suicide site (Livingstone et al., 2011). Other than that, personal data misuse in relation to children also shows a worrying trend, especially with regards to identity theft, personal information abuse and financial loss. Nine percent of children surveyed by EU Kids Online say that they have experienced at least one of these three forms of personal data misuse (Livingstone et al., 2011).

In conjunction with these risk concerns, many studies have also examined how parents play a role in influencing their children's Internet usage (Eastin, Greenberg & Hofschire, 2006; Macgill, 2007; Livingstone & Helsper, 2008; Liau, Khoo & Ang, 2008; Livingstone, 2009a; Tripp, 2011) and enhancing their positive uses (Livingstone & Bober, 2004; Livingstone, Bober & Helsper, 2005; Hasebrink et al., 2008). Parents are cautious about how best to play their role in ensuring that children experience opportunities and avoid risks online. While parents cannot control the media, they can, as the people closest to their children, protect and supervise their children's Internet use (Livingstone, 2009b). Parents who are aware of the risks that the Internet poses to their children can mediate their children's Internet usage simply by placing the home computer in a high-visibility area, asking their children about the websites they visit and the friends they chat with online, and installing filtering mechanisms that block dangerous websites (MCMC, 2009). However, what is actually the best form of mediation that parents should implement in order to increase CPU of the Internet?

Generally in parental mediation theory (PMT), there are three mediation techniques that parents can apply to all media, namely "active", "restrictive" and "co-viewing" mediation (Clark, 2011). However, comparing the Internet with other media such as television and video games, a certain element of mediation strategies are not suitable for use when it comes to the Internet. For example, it is difficult to make Internet use a shared activity because of screen size, sitting position, reliance on the mouse, and the common location of computers, i.e. being situated in a small or private room. Online activities are also less easily monitored with a casual glance at the screen, given the capability to multitask across multiple open windows (Livingstone & Helsper, 2008). Because of this, Livingstone and Helsper (2008) introduce four PM constructs specifically to mediate children's Internet use, namely "active co-use", "interaction restrictions", "technical restrictions", and "monitoring". However, little is yet known of the effectiveness of those constructs in increasing online opportunities.

Empirical studies have found that only certain constructs of PM of Internet usage, such as "recommending websites" and "co-using", has positive outcomes towards children's educational Internet use and online

communications (Lee & Chae, 2007; Fujioka & Austin, 2002; Strom, Strom, Wing & Beckert, 2009). A study carried out in eight European countries by Mediappro (2006) found that PM has a significant negative correlation with the take-up of online opportunities. Kalmus et al. (2009b) has found that PM was taken seriously by children when it comes to Internet usage in relation to downloading material, IM, sending and reading emails, and talking in chatrooms. However, parental rules do not appear to be effective when it comes to playing games online and in content creation.

There is lack of empirical research into which PM technique is better suited to increasing CPU of the Internet. Most studies examine the relationship between PM and risks, therefore when parents do apply PM techniques when their children use the Internet, their intention and knowledge is only to reduce risks – not to enhance opportunities. Parents also have their own mediation preferences, and not all the four techniques of Internet mediation are equally used by parents (Livingstone & Helsper, 2008; Liau et al., 2008; Tripp, 2011). Parents have a preference for social over technical forms of mediation, preferring "active co-use" over "technical restriction", "interaction restriction" and "monitoring" (Hasebrink et al., 2008; Livingstone & Helsper, 2008, Eastin et al., 2006). This study attempts to examine the causal effect of PM techniques, specifically on CPU of the Internet.

Studies on PM of children's Internet usage reveal that parents prefer to guide their children's Internet usage by having conversations with them regarding the pros and cons of their online activities. To gain a better understanding of the role that parents' prefer to play, this study attempts to integrate cultural capital theory's constructs of "attitudes" and "activities" (Byun, Schofer & Kim, 2012; Livingstone, 2007). Effective conversation between parents and children regarding Internet use can only happen if parents have the right attitude towards the new media, and have vast knowledge about online activities. Attitudes and knowledge are among the constructs stated clearly in Lee and Bowen's (2006) cultural capital theory. Past studies' results on PCC theory state that the greater the parent's cultural capital, the greater their advantages in procuring additional capital that will benefit their family members (De Graaf, De Graaf & Kraaykamp, 2000, Lee & Bowen, 2006; Tondeur, Sinnaeve, van Houtte & van Braak, 2011). De Graaf et al.'s (2000) study reveals that parents' attitudes predict their children's success in school. This study attempts to apply PCC theory to find out whether it is applicable to contributing towards CPU of the Internet.

Concerning gender, this study aims to investigate its moderating effects towards the relationship between both independent variables (PM and PCC) and dependent variables (CPU of the Internet). Gender stereotypes communicated by parents contributed to unequal online opportunities received by boys and girls. Boys are reported to receive more support from their parents to use Internet, thus making boys more confidence about using the Internet, while girls are reported to receive more control and rules from parents, thus making them lose confidence and interest in using the Internet (Vekiri & Chronaki, 2008; Hasebrink et al., 2008; Papastergiou, 2008; Lim & Meier, 2011). However, on the other hand, Liau et al. (2008) study reveals that boys receive more PM compared to girls.

Statement of Research Problem

While social factors and gender are two constructs that play important roles in determining how users use new technology (Venkatesh & Morris, 2000), they have been given little attention by researchers. This study attempts to contribute data regarding the influence of social factors, namely PM and PCC, towards CPU of the Internet and how gender moderates these influences. Hopefully with PM and PCC at hand, parents will able to implement appropriate strategies and empower themselves with regards to the Internet in order to increase CPU of the media. This would then enable parents to contribute in helping their children (boys and girls equally) move up the ladder of opportunities, i.e. to move from conducting basic online activities, such as using e-mail and browsing, to more advanced uses, such as e-learning and accessing government services (Livingstone & Helsper, 2007), enlarging social networks, and further identity development (Boonaert & Vettenburg, 2011).

With the introduction of the Internet, the hopes and fears of parents incite about how to encourage children to make the most of the opportunities afforded to them by the Internet, whether they use it at home, school or elsewhere. The goal of most empirical studies towards PM on children's Internet usage is to avoid online risks (Eastin et al., 2006; Macgill, 2007; Livingstone & Helsper, 2008; Liau et al., 2008; Livingstone, 2009b; Livingstone et al., 2011; Tripp, 2011). The literature is lacking in relation to PM and CPU of the Internet, especially in the Malaysian context. Adding to PM constructs, this study also looks at PCC's constructs of "attitudes" and "activities". Most studies on PCC focus on the relationship between cultural capital and children's school achievement, which reveals that a higher cultural capital tends to be associated with learning efficiency (Tondeur et al., 2011; Paino & Renzulli, 2012). Data on the causal relationship between PCC and CPU of the Internet are very limited, with previous studies only touching on the specific cultural capital of the availability of a good home Internet connection, revealing that a good Internet connection at home tends to be associated with more access to information (van Deursen & van Dijk, 2014). Parents' views and attitudes are a crucial factor for children's productive use of the Internet (Kabakci, Odabasi & Coklar, 2008) and parents should be active, involved and in the know when it comes to children's Internet use (AMTA, n.d.)

At present, most Malaysian studies regarding Internet use are more focused on the subject group of university students and topics of diffusion of innovation or technology acceptance of Facebook and social networking sites (SNSs) (Mustaffa, Ibrahim, Wan Mahmud, Ahmad, Chang & Mahbob, 2011; Almadhoun, Lai & Dominic, 2012; Daud, Bahar & Adnan, 2013). Studies conducted on schoolchildren were focused merely on uses and the gratification approach (Mondi, Woods & Rafi, 2008; Soh, Chew, Veeri & Ang, 2011; Baboo, Pandian, Prasad & Rao, 2013). Very little attention is paid by the literature to social factors that influence children's Internet usage, especially regarding the positive side. At present, only Soh (2010) studies the influence of social factors on children's Internet use in Malaysia, however, the approach is from the perspective of parental attachment and Internet addiction. To the best knowledge of the researcher, there has been no research conducted in

Malaysia on children's Internet use incorporated with the approaches of PM and PCC. With the aforementioned gaps in mind, this study hopes to provide more data regarding how social factors, in this context, parents, can influence their children to use the Internet positively.

Research Questions

As explained in the previous section, this study seeks to answer the following questions:

1. What is the pattern of children's Internet usage in Malaysia?
2. Does PM (active co-use, interaction restrictions, technical restrictions and monitoring) have any relationship with CPU of the Internet?
3. Does PCC (attitudes and activities) have any relationship with CPU of the Internet?
4. Does a child's gender moderate the relationship between PM (active co-use, interaction restrictions, technical restrictions and monitoring) and CPU of the Internet?
5. Does a child's gender moderate the relationship between PCC (attitudes and activities) and CPU of the Internet?

Research Objectives

General Objective:

To determine the relationship between PM factors and PCC factors toward CPU of the Internet.

Specific Objectives:

1. To identify the pattern of positive Internet usage among Malaysian children.
2. To determine the relationship between the PM techniques of active co-use, interaction restrictions, technical restrictions and monitoring on CPU of the Internet.

3. To determine the relationship between PCC attitudes and activities on CPU of the Internet.

4. To determine children's gender moderating effect on the relationship between the independent variables and CPU of the Internet.

Significance of the Study

This study theoretically contributes to the general knowledge regarding PM and PCC by establishing valid and reliable constructs for investigating CPU of the Internet. The PM variables applied in this study are active co-use, interaction restrictions, technical restrictions and monitoring, meanwhile the PCC variables are attitudes and activities. CPU of the Internet variables are information, communication, entertainment, participation, creativity and expression.

This study makes an important contribution to the literature pertaining to PMT by testing its causal effect directly on CPU of the Internet. Most studies carried out on PM that test its direct causal effect on online risks or its mediating effect on the relationship between demographic variables [age, gender and social economic status (SES)] and children's opportunities online. This study also makes an important contribution towards PCC theory by testing its causal effect on CPU of the Internet. To the knowledge of the researcher, none of past studies have ever conducted research on this association, most research on PCC conducted to test its causal effect towards children's school performance.

In terms of methodological contribution, instead of using first-generation statistical methods (analysis of variance and regression-based approaches) as what often used by previous studies, this study has employed second-generation statistical methods, which is using structural equation modeling (SEM) to focus on which independent variables are statistically significant predictors of CPU of the Internet.

From practical point of views, this study contributes data to enable policy makers or organizations that engaged with the Internet such as: the Communication and Multimedia Ministry (KKMM), Ministry of Science, Technology and Innovation (MOSTI), Ministry of Women, Family and Community Development (KPWKM), Ministry of Education (MOE), Malaysian Communications and Multimedia Commission (MCMC) and Cyber Security Malaysia to take a broader view on PM, PCC and children's online opportunities. It presents updated data on PM, PCC and children's online opportunities. As for CPU of the Internet alone, this study offers a suggestion to the policymakers, parents and Internet experts on how to enhance the take up of online opportunities for children. Finally, this study aims to offer suggestions as to how parents can fine tune their strategies regarding how to regulate their children's Internet usages in order to help them capitalise on the opportunities available.

Scope of the Study

The scope of this study is limited to schoolchildren between the ages of 9 and 16 years old in Selangor, Malaysia, and one of their respective parents/guardians. As required by the Malaysian Ministry of Education, children aged 12, 15 and 17 years old who were involved in Primary School Evaluation Test (UPSR), Lower Secondary Assessment (PMR) and the Malaysian Certificate of Education (SPM), respectively, were excluded from participating in this survey so as not to disturb their studies. Selangor was chosen because it has the highest percentage of Internet users in Malaysia, with 24.5% of percentage share (MCMC, 2013). Only national primary schools (Sekolah Rendah Kebangsaan) and regular secondary schools (Sekolah Menengah Biasa) in urban and rural areas were selected for participation in this study because the majority of Malaysian schoolchildren are educated in these types of schools (EMIS Portal, n.d).

Definition of Keywords

Positive use of the Internet

In the context of my research, the positive use of the Internet is that of using Internet technology to gain opportunities. Positive uses in this study have been classified into six categories: information, communication, entertainment, participation, creativity and expression (Livingstone and Helsper, 2010).

Information use

Children use the Internet to access information for educational purposes regarding schoolwork and further education assignments, searching for news, information about environmental issues, charity, hobby and health, all of which enables them to excel in their studies and enhance their general knowledge.

Communication use

Children use the Internet for communication purposes through activities such as communicating via e-mail, IM, chatrooms, Facebook, Twitter and Skype, all of which enable them to increase their social network and communicate with people all over the world who share the same interests.

Entertainment use

Children use the Internet for entertainment through activities such as playing educational games; listening to and downloading music; watching and downloading films, television programs and music videos.

Participation use

Children use the Internet to play an active part in the community by participating in activities such as online voting and quizzes; sharing information through weblinks; discussing ideas and experiences in online forums and on blogs; and also collaborating with people to produce online creations, such as digital video or photography.

Creativity use

Children use the Internet to exercise their creativity by engaging in online content creation activities, such as setting up websites, and uploading and sharing their own creative projects, including video music, animation and arts.

Expression use

Children use the Internet to express and share their thoughts and feelings through activities such as writing blog posts and posting on Facebook and Twitter, as well as uploading photos and drawings; and offering advice to others.

Parental mediation

PM is a concept regarding parental management of their children's media usage (Livingstone & Helsper, 2008). It extends the parental role beyond simple restrictions to also include active co-use, interaction restrictions, technical restrictions and monitoring techniques.

Active co-use technique

Active co-use is mediation applied by parents that includes strategies such as explaining and enforcing restrictions during parent-child co-use of the Internet. Parents talk to their children about what they do on the Internet, stay nearby when their children are online and assist children with research by identifying keywords and choosing paths to pursue.

Interaction restrictions technique

Interaction restrictions mediation involves strategies such as setting rules that restrict problematic activities such e-mail, chat, IM, games and downloading content.

Technical restrictions technique

Technical restrictions mediation consists of strategies such as software installed on a computer or other devices used by children to filter and monitor online content.

Monitoring technique

The monitoring mediation technique includes activities such as parents checking children's computer use from time to time in order to monitor the websites that they visit.

Parental cultural capital

PCC is the position that parents hold in terms of their attitude towards the Internet and online activities, which are then conveyed to their children to increase children's involvement in positive online activities.

Attitudes

Attitude is an indicator of cultural capital that shows how positive parents' attitudes are towards computers and the Internet.

Activities

Activities is an indicator of cultural capital that shows the extent of parents' involvement in online activities such as using SNSs, web albums, Internet banking, Internet billing, online shopping and viewing videos on YouTube.

Organization of the study

This study is organised into five chapters. The present chapter focuses on the background of the study, research problem statement, research questions and research objectives.

Chapter Two reviews the literature by focusing first on the Internet technology in general, the pattern of children Internet usage, CPU of the Internet, PM of the Internet and PCC. The second part of chapter two elaborates on the relationship between PM and CPU of the Internet, the relationship between PCC and CPU of the Internet, together with the gender effect on children's Internet usage, PM and PCC.

Chapter Three is exclusively focused on the research methodology. The design of the study is first explained, after which the variables and measurement instruments are discussed. The dependent variable, independent variables and

moderating variable of the research are explained in detail. Finally, this chapter explains the data screening process. It elaborates on the reliability of the instrument and normality of the data.

Chapter Four covers the results of the research and the discussion. This chapter begins with the presentation and discussion on the descriptive analysis results, followed by the hypothesis testing results.

Chapter Five is arranged firstly to give a brief overview of the research summary. In addition, the research problem, research objectives, methodology and findings are reviewed. Then, it elaborates on the conclusion, after which the theoretical and practical implications of the study are discussed. Finally, the limitations of the study are discussed, and a number of recommendations are given to future research into the field of children's use of new media.

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