

## Parental Mediation of children's positive use of the Internet

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**Abstract:** Parents play an important role in how their children use media. There has been limited research in Malaysia on the influence of four parental mediation strategies (active co-use, interaction restriction, technical restriction and monitoring) on children's positive use of the Internet. This study investigates the relationship between the four mediation strategies and children's positive use of the Internet. The data were collected from 384 children aged 9 to 16, and 384 parents; both types of data were collected using self-administered questionnaires. The study was conducted in the state of Selangor, Malaysia by using stratified sampling. Path analysis revealed that parental mediation via active co-use and interaction restriction had a significant negative relationship with children's positive use of the Internet, while technical restriction had a significant positive relationship with children's positive use of the Internet. Parental mediation via monitoring had non-significant relationship with children's positive use of the Internet. Thus, parental mediation through technical restriction seems to be a better strategy in promoting children's positive use of the Internet. The study emphasizes the role of parents when dealing with children's positive use of the Internet. Parents should place greater attention on their technical restriction strategy, rather than using active co-use, interaction restriction or monitoring strategies. This will provide more online opportunities for children.

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### 1. Introduction

Technology is evolving; while it is impossible to control these changes, people can adapt to the new technology. This is especially vital for parents and Internet technology. Generally, most parents are not experts in technology compared to their children, but they play the main role in managing their children and ensuring they use the Internet positively. Internet technology provides children with a wide range of positive uses and opportunities. In metaphorical conceptions, the Internet has been compared to "an ocean of information where everyone may fish" (Savoleinan and Kari, 2004: 222). The Internet has greatly affected information access, education, communication and entertainment. The Internet can enrich children's school-based learning, serve as a vehicle for sharing creative and intellectual work with others, enable children to communicate with people around the world, and also provide a potentially valuable pastime.

How can we tell what form of Internet usage will positively benefit children and enable them to access opportunities? Children, like adults, are difficult to predict in terms of what may benefit them. Much depends on the interpretative contexts of use, and these are as heterogeneous for children as for any other population (Livingstone, 2009). In the context of new technology, the hopes and fears have generated

some pressing questions to parents on how to encourage children to make the most of the opportunities afforded by the Internet, whether they use it at home, school or elsewhere. Most empirical studies on parental mediation related to children's Internet usage focuses on avoiding online risks (Eastin et al., 2006; Macgill, 2007; Livingstone and Helsper, 2008; Liao et al., 2008; Livingstone, 2009; Tripp, 2011; Livingstone et al., 2011). Instead of worrying about online risks and putting tight controls on children's Internet use, parents should plan appropriate mediation strategies to increase children's positive use of the Internet.

Positive use of the Internet for children relates to maximizing the advantages of their Internet use. Many classifications about positive use of Internet have been presented by scholars, and most of these include information/learning, communication, entertainment, participation, creativity and expression (Livingstone and Helsper, 2010; Jackson et al., 2007; Livingstone, 2004). This study focuses on six common positive uses of the Internet, which are: information, communication, entertainment, participation, creativity and expression. Meanwhile, in relation to parental mediation, this study focuses on four mediations that have been specifically created to mediate children's Internet usage (Livingstone and Helsper, 2008), which are: active co-use, interaction

restriction, technical restriction and monitoring. Parents play a vital role in ensuring that children use the Internet positively. In order to do so, parents must practice mediation strategies to manage their children's Internet usage. Parental mediation is widely defined as parental management of the relation between children and media; it extends the parental role beyond simple restrictions to encompass conversational and interpretive strategies, as well as parental monitoring activities (Livingstone and Helsper, 2008).

### *1.1 Children's Positive Use of the Internet*

Positive use of the Internet is mainly measured 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 and Lieberman, 1998; Sorbring and Lundin, 2012). It can be measured by children's activities online, which can be classified into three categories: (1) content-based activities, such as schoolwork, playing games, watching video clips, reading news or downloading music; (2) contact/communication-based activities, such as instant messaging, email, chatting or Skype; and (3) conduct/peer-participation activities, such as blogging, posting photos or file-sharing (Pruulmann-Vengerfeldt and Runnel, 2012; Livingstone and Helsper, 2010; Paus-Hasebrink et al., 2010; Livingstone and Haddon, 2009; Kalmus et al., 2009). Online content-based activities enable children to benefit from learning, information and entertainment; contact-based activities provide communication, participation and expression; and conduct-based activities allow participation, creativity and expression (Livingstone, 2009; Livingstone, 2004).

According to Kalmus et al. (2009), children's opportunities and benefits online can be theoretically contextualized in relation to the notion of structure and agency. Structure refers to availability, which includes parental guidance and rules, as well as broadband connection, the child's own computer, and time spent online. Meanwhile, agency refers to children's capability to use the Internet, which includes freedom, motivation, will, choice, creativity, initiative, etc. Online opportunities and benefits are themselves interconnected and depend on children's availability and capability in relation to the technology. Based on this theory, Kalmus et al. (2009) came up with four patterns of children's positive Internet usage: school-favoured uses, popular uses, resource-bound uses and advanced uses. **School-favoured** uses centre on information-seeking and educational use; most children take up these opportunities because both availability and capability

support them. **Popular uses** relate to communication and entertainment; in Europe, only 60 to 70 percent of children take up these opportunities. Although these activities are the most favoured among children when using the Internet, in terms of availability they are limited by parents and rules. **Resource-bound uses** include communication and entertainment, which includes watching videos, movies, and television programmes, and playing online games. Slightly more than 50 percent of children in Europe engage with these activities. Parents, or adults in general, may perceive these activities as a waste of time, but for children they are motivational. **Advanced uses** refer to a range of interactive and creative activities such as buying online, blogging and making homepages. These are practised by less than 50 percent of children in Europe, because the activities need strong availability and capability, for example good Internet skills and strong Internet connection.

### *1.2 Parental Mediation Strategies*

There are three general mediation strategies that apply to all media: (1) active mediation consists of talking about media content with children; (2) restrictive mediation involves setting rules that restrict use of the media, including time spent, location of use or content, and (3) co-using signifies that the parent remains present while the child is using the media, without commenting on the content or its effects.

Research has suggested that parental input can effectively counteract possible negative influences of media messages on children, while cultivating their potential for positive effects (Fujioka and Austin, 2002). Parents with close ties to their children have been found to be influential in reducing their children's online entertainment and pastimes, social-interaction, and erotic motivations, as well as Internet addiction (Soh, 2010). The more involved and the more mediation parents exercise in their parenting styles, the less time adolescents will spend interacting via social networking site (SNSs), downloading audio/video files, and seeking entertainment news online (Leung and Lee, 2012).

Livingstone and Helsper (2008) revealed four factors of parental mediation specifically related to Internet use; these are: (1) active co-use, (2) interaction restriction, (3) technical restriction, and (4) monitoring. Active co-use mediation is mainly about explaining and enforcing restriction during parent-child co-use (Livingstone and Helsper, 2008). Active co-use includes restricting the child in relation to giving out personal information, buying online or completing forms and quizzes online. Most parents talk to their children about what they do on the Internet, and stay nearby when the child is online (Livingstone et al., 2011). The parental role could also

include assisting children with research by identifying keywords and choosing paths to pursue (Strom et al., 2009). Active co-use is positively related to online opportunities; that is, the more parents recommend websites that are good for their children, and the more they use the Internet with their children, the more frequently the children will use the Internet for educational purposes (Lee and Chae, 2007). Active co-use is also related to positive use of the Internet for communication; that is, the more parents use the Internet together with their children, the more frequently the children are involved in online communication (Lee and Chae, 2007).

Interaction restriction is usually used by parents to address problematic activities by banning e-mail activities, chat, and instant messaging (IM), along with playing online games and downloading music, films, etc (Livingstone and Helsper, 2008). Parents tend to increase restriction mediation when their children's friends are also present in the house (Amarach Consulting, 2004). Research has also found that restrictive mediation is significantly associated with reducing online opportunities, meaning that parents who restrict their children's interaction via email, chat and IM will keep their children safer at a cost, because those activities are among the biggest benefits of the Internet (Garmendia et al., 2012).

Another restrictive mediation is technical restriction, which consists of software installed on computers used by children to monitor the way they use the Internet (Kirwil et al., 2009). This parental mediation factor is unique to the Internet. However, the use of technical safety tools is relatively low: just over a quarter of parents block or filter websites (28 percent) and/or track the websites visited by their children (24 percent) (Livingstone et al., 2011). Fifty nine percent of parents declared that they use filtering or monitoring software, however was not as popular, but in a study in 27 European countries it was still used by almost four out of 10 parents (Eurobarometer, 2008). A study regarding Internet use in Midwestern US states found that technological means are the least-used mediation technique by parents (Eastin et al., 2006). Technical mediation was found to have a positive relationship with children's Internet usage, wherein the more technical restriction applied by parents, the more opportunities children experience online (Garmendia et al., 2012).

The fourth parental mediation strategy for Internet use is monitoring mediation, which means parents check their children's computer use from time to time (Kirwil et al., 2009) and monitor the sites children visit online by inspecting their browsing history (Strom et al., 2009). Some 65 percent of parents in America report that after their child has been on the Internet, they check to see what websites

he or she has viewed. Irish mothers (72 percent) monitor their children's online activities on a daily basis (Amarach Consulting, 2004). A study in Singapore by Liao et al. (2008) found that more than half (54.2 percent) of parents say they have sat with their children while they are on the Internet; 66.5 percent of parents said they have talked to their children about Internet safety; and 35.3 percent of parents says they have checked to see which websites their children have visited. However, monitoring mediation in terms of regularly checking whether children have a profile on a social networking site, or monitoring the messages in their child's email or IM account, were least used by parents (Eurobarometer 2008). Parental monitoring of children's activities online is linked to children involvement in positive online activities (Liao et al., 2008).

The goal of most empirical studies in relation to parental mediation of children's Internet usage is to avoid online risks (Eastin et al., 2006; Macgill, 2007; Livingstone and Helsper, 2008; Liao et al., 2008; Livingstone, 2009; Tripp, 2011; Livingstone et al., 2011). The literature is lacking in relation to parental mediation of children's positive use of the Internet; thus, this study attempts to bridge this gap. Instead of worrying about online risks and putting tight controls on children's Internet use, parents should plan appropriate strategies on how to increase children's positive use of the Internet. They must help their children to move up the ladder of opportunities – from basic activities such as e-mail and browsing to more advanced uses such as e-learning and accessing government services (Livingstone and Helsper, 2007), or enlarging social networks, and furthering identity development and opportunities for education (Boonaert and Vettenburg, 2011).

This study developed and tested a research model that examines the relationship between four types of parental mediation strategies and children's positive use of the Internet. Four hypotheses are proposed (see Figure 1):

- H1: There is a positive relationship between parental mediation active co-use and children's positive use of the Internet.
- H2: There is a negative relationship between parental mediation interaction restriction and children positive use of the Internet.
- H3: There is a positive relationship between parental mediation technical restriction and children's positive use of the Internet.
- H4: There is a positive relationship between parental mediation monitoring and children's positive use of the Internet.

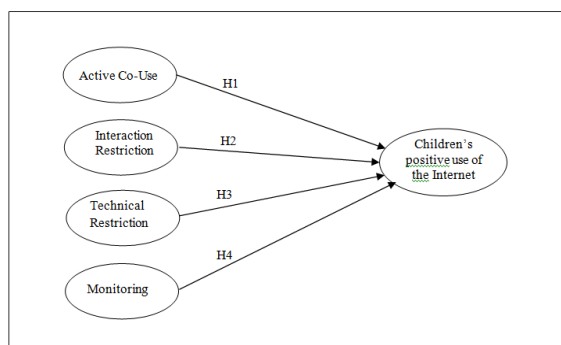


Figure 1. A model for studying parental mediation and children's positive use of the Internet

## 2. Materials and Methods

This study was conducted in the state of Selangor, Malaysia, using four secondary schools and four primary schools. The respondents were family units consisting of a child aged 9, 10, 11, 13, 14 or 16 years old, and one of their parents/guardians. Students aged 12, 15 and 17 were excluded from the study because they were involved in National examinations at the time of the research (*Primary School Evaluation Test (UPSR)*, *Lower Secondary Assessment (PMR)* and *Malaysian Certificate of Education (SPM)*). The sample was stratified according to the age group categories using the following formula:

- Step 1:

$$\frac{\text{Total population of one age group} \times X}{\text{Total Population}} \times 100 = \% \text{ of one age group}$$

$$\% \text{ of one age group} \times 365 = \text{sample needed for each age group}$$

- Step 2:

$$\frac{\text{Population of one age group}}{\text{Total population of one age group}} \times 100 = \% \text{ of one age group in one school}$$

$$\% \text{ of one age group in one school} \times \text{sample needed for one age group} = \text{sample of one age group in one school}$$

In order to collect the data, the students were asked to take home a questionnaire for their parents, together with consent letters in order to get permission from their parents to take part in the study. This study utilized classroom-administered questionnaires for the school children and self-administered questionnaires for the parents/guardians. The total number of respondents who completed the questionnaire was 384.

### 2.1 Measurements

All measurements used in this study were adapted from prior studies in the related literature. The questionnaire was originally prepared in English then translated into Malay language (Bahasa Malaysia). Descriptive analysis was conducted using the Statistical Package for Social Science (SPSS),

while the rest of the analysis was conducted using AMOS, including the assessment for confirmatory factor analysis (CFA), to assess the validity and reliability of the constructs (Hair et al., 2010), together with the hypotheses tests.

In total, six different kinds of children's positive use of the Internet were investigated: information, communication, entertainment, participation, creativity and expression. Meanwhile, four parental mediation strategies were investigated: active co-use, interaction restriction, technical restriction and monitoring. Children's positive use of the Internet was measured by asking a question to identify whether they had been involved in the six positive uses of the Internet, and parental mediation was measured by asking the parents to identify whether they had applied any of the four mediation strategies (response scale: never (1) to very often (5)). The reliability of the scale was analysed using Cronbach's alpha test, which resulted in the following alpha values: information = 0.798, communication = 0.836, entertainment = 0.705, participation = 0.707, creativity = 0.744 and expression = 0.793. Meanwhile the values of the reliability coefficients for parental mediation were: active co-use = 0.857, interaction restrictions = 0.865, technical restrictions = 0.946, and monitoring = 0.874.

## 3. Results

### 3.1 Respondents' Profile

The demographic characteristics of the respondents are shown in Table 1. Of those who participated in this study, 60.7 percent were older children (between the ages of 13 and 16) and about 39.4 percent were younger (between the ages of 9 and 11). Meanwhile, for parents/guardians, 96.9 percent were fathers or mothers, while 57.2 percent were aged between 42 and 53. Most (about 19.7 percent) of the parents/guardians earned between RM2001 to RM3000 a month. With respect to education, most (27.3 percent) of the parents/guardians either were SPM holders and bachelor's holders (27 percent). In terms of both children's and parents'/guardians' gender, the majority were female (children – 65.4 percent female, 34.6 percent male; parents – 55.6 percent female, 44.4 percent male). The majority of respondents were Malay (children – 74.2 percent; parents/guardians – 73.6 percent) and Muslims (children – 74.7 percent; parents/guardians – 74.7 percent), and most of them lived in an urban area (51.2 percent).

**Table 1. Respondents' profile (age, number of family members, gender, race, religion, living area and schooling)**

Profile		Frequency (N=384)	Percentage (%)
Children's age (years)	9	48	12.5
	10	49	12.8
	11	54	14.1
	13	82	21.4
	14	93	24.2
Parents'/ guardians' age (years)	18-29	6	1.8
	30-41	128	38.3
	42-53	191	57.2
	54-65	9	2.3
	<b>Mean: 42.53</b> <b>SD: 6.06</b> <b>Min: 18 years</b> <b>Max: 62 years</b>		
Parents' income	< 1000	27	8.9
	1,001-2,000	41	13.4
	2,001-3,000	60	19.7
	3,001-4,000	44	14.4
	4,001-5,000	33	10.8
	5,001-6,000	21	6.9
	6,001-7,000	14	4.6
	>7,000	37	12.1
<b>Mean: 3933.50</b> <b>SD: 3383.77</b> <b>Min: 0</b> <b>Max: 30,000</b>	No Income	28	9.2
No. of family members	1-3 people	23	6.0
	4-5 people	176	46.1
	6-7 people	151	39.5
	>7 people	32	8.4
<b>Mean: 5.56</b> <b>SD: 1.55</b> <b>Min: 2</b> <b>Max: 15</b>			
R/S to child	Father/mother	369	96.9
	Step-father/-mother	1	0.3
	Foster parent	2	0.5
	Uncle/aunt	5	1.3
	Brother/sister	2	0.5
	Grandparent		
Children's gender	Male	133	34.6
	Female	251	65.4
Parents' gender	Male	168	44.4
	Female	210	55.6
Parents' education	Standard 6	7	1.9
	SRP/PMR	21	5.7
	SPM	100	27.3
	STPM	25	6.8
	Diploma	77	21.0
	Bachelor's	99	27.0
	Master's	31	8.5
	PhD	2	0.5
Other	4	1.1	
Children's race	Malay	285	74.2
	Chinese	54	14.1
	Indian	40	10.4
	Other	5	1.3
Parents' race	Malay	282	73.6
	Chinese	53	13.8
	Indian	41	10.7
	Other	7	1.8
Children Religion	Islam	287	74.7
	Buddha	45	11.7
	Hindu	36	9.4
	Christian	12	3.1
	Other	3	0.8
Parents' religion	Islam	287	74.7
	Buddha	46	12.0
	Hindu	36	9.4
	Christian	13	3.4
	Other	2	0.5
Living area	Urban	190	51.2
	Rural	181	48.8

Note: R/S=Relationship, SRP=Malaysia Lower Certificate of Education, PMR=Lower Secondary Assessment, SPM=Malaysian Certificate of Education, STPM=Malaysian Higher Certificate of Education

3.2 Descriptive Analysis for Children's Positive Use of the Internet

Descriptive data analysis for children's positive use of the Internet is shown in Table 2. The mean and standard deviation (SD) were derived from the survey responses. The respondents' preferences were identified using a five-point Likert scale including: "very often", "often", "sometimes", "seldom" and "never". Based on Table 2, the most popular online activities for children that are categorized as positive usage in relation to information were: "looking for information regarding education" (mean=3.52) and "doing schoolwork" (mean=3.45). Children's communication activities online were mainly "using Facebook" (mean=3.65) and "Instant Messaging (IM)" (mean=3.48). The most popular entertainment activity was "downloading music" (mean=3.20). Expression activities for children were limited to "uploading photos or drawings" to Facebook (mean=2.82). Participation and creativity activities were not popular among school children, since most said that they never do these activities.

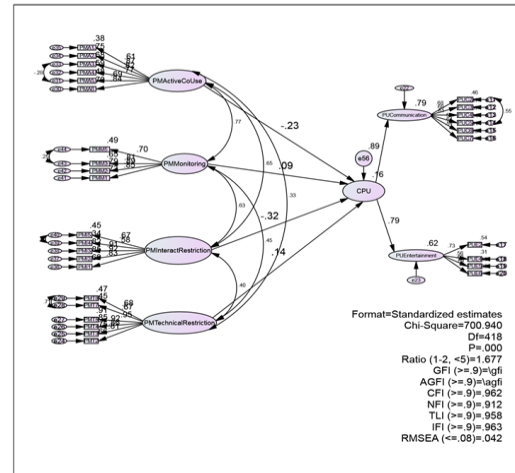


Figure 2: Path Analysis

The descriptive data analysis for parental mediation is shown in Table 3. In terms of strategies to regulate children's positive use of the Internet, the findings show that most parents used an **active co-use** strategy such as "setting rules that restrict the child from buying anything online" (mean=3.86); "setting rules that restrict the child from giving out personal information" such as home address or telephone number (mean=3.62); "setting rules about time spent online" (mean=3.40); "setting rules that restrict the child from taking part in any quiz or filling out any online competition forms" (mean=3.31); "talking to the child about good and bad use of Internet" (mean=3.16); "watching screen when child is online" (mean=3.07) and "helping child when completing activities online" (mean=2.92). The parental-

mediation **monitoring** strategy was also applied to regulate children's Internet usage, however it was only popular for "*checking what websites children have visited*" (mean=3.12) and "*checking children's activities on Facebook*" (mean=3.06). The other parental mediation techniques, **interaction restriction** and **technical restriction**, were not popular; most of the parents said they had never use these strategies to regulate their children's positive use of the Internet.

### 3.3 Descriptive Analysis for Parental Mediation

The path analysis (Figure 2) consists of both the measurement and structural parts of the model.

The loading estimates for the other multi-item constructs are virtually unchanged from the measurement result. This parameter stability provides further support for the validity of the measurement model. In Figure 3, the results reported a good fit with the model: Chi-square ( $\chi^2$ ) value of 700.940 with 418 degrees of freedom,  $\chi^2/DF$  of 1.677; CFI=0.962; TLI=0.958; NFI=0.912; IFI=0.963, RMSEA= 0.042. The indices signified adequate fit of the model to the data.

**Table 2. Descriptive statistics for children's positive use of the Internet**

Dependent Variables	Mean	SD	Overall Mean	Overall SD
<b>Information</b>				
Looking for information regarding education	3.52	1.01	31.17	7.73
Doing schoolwork	3.45	1.04		
Looking for current news	2.64	1.08		
Visiting websites to get information about hobby	2.60	1.16		
Visiting websites to get information about health	2.42	1.10		
Looking for information on computers	2.39	1.08		
Visiting school websites	2.36	1.12		
Visiting websites about protecting the environment	2.14	1.08		
Visiting government websites	2.07	1.07		
Looking at other people's personal homepages	1.99	1.10		
Looking for products/shops	1.91	1.13		
Visiting websites about children's rights	1.84	1.00		
Visiting websites about charity organizations	1.84	0.97		
<b>Communication</b>				
Using Facebook	3.65	1.43	17.95	6.60
Using Instant Messaging (IM)	3.48	1.43		
Sending e-mails or text messages to a site	2.48	1.33		
Sending/receiving e-mails	2.33	1.22		
Using Twitter	2.26	1.56		
Using chat-rooms	1.97	1.33		
Using Skype	1.78	1.16		
<b>Entertainment</b>				
Downloading music	3.20	1.47	15.83	5.39
Playing educational games	2.94	1.21		
Downloading clips	2.91	1.35		
Looking for cinema/theatre/concert listings	2.45	1.24		
Downloading films	2.35	1.38		
Downloading TV shows	1.97	1.24		
<b>Participation</b>				
Doing a quiz	2.12	1.06	8.67	3.39
Voting for something/someone	1.81	1.13		
Linking useful information	1.78	1.15		
Participating in discussion forums	1.53	0.89		
Collaborating with someone to produce content for YT	1.43	0.90		
<b>Creativity</b>				
Planning a trip	2.00	1.24	8.69	3.80
Creating arts	1.97	1.20		
Trying to set up a webpage	1.64	1.01		
Creating animations	1.63	1.04		
Uploading and sharing own content to YT	1.46	0.95		
<b>Expression</b>				
Uploading photos or drawings	2.82	1.35	11.05	4.43
Offering advice to others	2.54	1.24		
Writing updates stories on Facebook	2.34	1.28		
Writing updates stories on Twitter	1.84	1.36		
Writing blog posts	1.52	1.00		

Note: SD=Standard Deviation, YT=Youtube, TV=Television

**Table 3. Descriptive statistics for parental mediation**

<b>Independent Variables</b>	<b>Mean</b>	<b>SD</b>	<b>Overall Mean</b>	<b>Overall SD</b>
<b><u>Active co-use</u></b>				
Setting rules that restrict the child from buying anything online	3.86	1.43	28.96	7.96
Setting rules that restrict the child from giving out personal info.	3.62	1.26		
Setting rules about time spent online	3.40	1.24		
Setting rules that restrict the child from filling out online forms/quizzes	3.31	1.50		
Talking to the child about Internet use	3.16	1.09		
Watching screen when child is online	3.07	1.13		
Helping when child uses the Internet	2.92	1.14		
Staying nearby when child is online	2.79	1.06		
Sitting with child when online	2.79	1.02		
<b><u>Interaction restriction</u></b>				
Setting rules that restrict the child from downloading from the Internet	2.75	1.41	12.42	5.76
Setting rules that restrict the child from playing online games	2.56	1.23		
Setting rules that restrict the child from using chat-rooms	2.51	1.44		
Setting rules that restrict the child from using IM	2.42	1.41		
Setting rules that restrict the child from using e-mail	2.17	1.35		
<b><u>Technical restriction</u></b>				
Installing filtering software	2.90	1.56	17.67	9.39
Installing filtering/monitoring software for porn sites	2.60	1.65		
Installing filtering/monitoring software for junk mail	2.30	1.55		
Installing filtering/monitoring software for adverts	2.10	1.40		
Installing filtering/monitoring software for e-mail	2.05	1.35		
Installing monitoring software	1.92	1.33		
Installing filtering/monitoring software for chat-rooms	1.89	1.30		
Installing filtering/monitoring software for IM	1.87	1.28		
<b><u>Monitoring</u></b>				
Checking sites child has visited	3.12	1.40	13.58	6.13
Checking child's activities on Facebook	3.06	1.44		
Checking photos child uploads to Web albums	2.73	1.52		
Checking child's e-mail messages	2.58	1.45		
Checking child's activities on Twitter	2.06	1.46		

Note: SD=Standard Deviation, IM=Instant Messaging

### 3.3 Hypotheses Testing

In examining the hypotheses, H1 demonstrated a significant negative relationship between parental mediation active co-use, and children's positive use of the Internet. Hypothesis 1 was therefore not supported. Path analysis between parental mediation interaction restriction and children's positive use of the Internet demonstrated a significant negative relationship. Hypothesis 2 was therefore supported. Hypothesis 3 was also supported. The path analysis between parental mediation technical restriction and children's positive use of the Internet showed a significant positive relationship. Meanwhile, path analysis between parental mediation monitoring and children's positive use of the Internet demonstrated no significant relationship, so Hypothesis 4 was not supported. The test results are summarized in Table 4.

**Table 4. Results of hypothesis testing**

<b>Hypothesis</b>	<b>Std. Regression Weight</b>	<b>Level of Sig.</b>	<b>Hypothesis Outcome</b>
H1: There is a positive relationship between parental mediation active co-use and children's positive use of the Internet.	-0.233 (weak)	P < 0.05	Not supported
H2: There is a negative relationship between parental mediation interaction restriction and children positive use of the Internet.	-0.323 (weak)	P < 0.001	Supported
H3: There is a positive relationship between parental mediation technical restriction and children's positive use of the Internet.	0.145 (very weak)	P < 0.05	Supported
H4: There is a positive relationship between parental mediation monitoring and children's positive use of the Internet.	0.090	Non-significance	Not supported

#### 4. Discussion

Previous studies have found that the more parents apply active co-use mediation, such as recommending websites and using the Internet together with their children, the more frequently the children use the Internet positively (Lee and Chae, 2007). However, the current study differs from this, finding that the more parents applied active co-use mediation, the less the children used the Internet positively. This situation may arise because there is now a culture of “individual bedroom access” (Eastin et al., 2006), and most children’s Internet usage at home is from their own bedrooms, which are equipped with a laptop or desktop computer, or from a private room in which their family’s computer and Internet connection situated. The increasing number of smartphone ownership by children also contributes to private access to the Internet. Thus, increased parental involvement with children’s Internet usage seems to represent an invasion of privacy, which means that children are not interested in using the Internet at home. Most of children’s Internet usage is at home, when the uses at home are less, the less online activities children will get involved, and hence the less benefit they will get from the Internet. In line with this reasoning, past research has found that children prefer to use Internet in private – the amount of time using the Internet doubles if the children have individual bedroom access to the Internet (Eastin et al., 2006).

This study also found that the more parental mediation interaction restriction was imposed on children, the less the children benefited from the Internet; this is in line with findings by Garmendia et al. (2012), together with Livingstone and Helsper (2008). Parents who restrict their children’s online interaction with certain users or Internet communities, such as restrictions in using e-mail, chat and IM, will keep their children safer at a cost, because these activities are among the most beneficial when it comes to Internet usage (Garmendia et al., 2012; Livingstone and Helsper, 2008). According to Kirwil et al. (2009), parents have “panic attacks” when they hear about children creating online SNS accounts, whereas they seem to turn a blind eye to truly risky online activities, such as giving out personal information online or talking to strangers whom they have met online. Parents seem to lack knowledge on how to really restrict children’s Internet usage. In fact, when children use the Internet for communication, by talking to other people who share the same interests, they are actually developing their creativity and civic activities (Livingstone, 2009; Livingstone and Helsper, 2007). However, there are pros and cons to applying interaction restriction strategies; for instance,

some studies have found that teenagers who spend more time on IM and chat-room sites are vulnerable to online interactions with strangers, which can increase risk of sexual solicitation (Mitchel et al., 2008; Wolak et al., 2008).

Parental mediation through technical restriction seems to be a better strategy in promoting children’s positive use of the Internet in Malaysia. This study has found that the more parents use technical restriction mediation, the more opportunities children will be able to access online (Garmendia et al., 2012). This type of parental mediation is unique to the Internet (Livingstone and Helsper, 2008), and has been variously applied to diverse forms of risky activities. Installing monitoring and tracking software will allow parents to view and discuss online content with children. It also allows parents to examine what websites their children visit, and for how long. Meanwhile, filtering software can help parents to monitor pop-up advertising and other unsolicited information. When Internet usage is free of risks and harm, it is not surprising that the strategy enables children to experience benefits online.

This study found that parental mediation monitoring has no effects on positive use of the Internet, which is consistent with a previous study conducted by Livingstone et al. (2011), which stated that parental mediation monitoring is imposed when children have experienced risks and harm online, in order to prevent further negative experiences.

#### 5. Conclusion

In the Malaysian context, parental mediation strategies for children’s positive use of the Internet should be more focused on a technical restriction strategy, rather than other strategies such as active co-use, interaction restriction or monitoring. When a technical restriction strategy is applied by parents, children will gain more opportunities online through using the Internet for communication and entertainment activities. However, when more emphasis is placed on an active co-use strategy or interaction-restriction strategy, online opportunities for children will decrease. Armed with this evidence, parents should increase their knowledge regarding technical restriction strategies, including how to install filtering/monitoring software and how to choose the best features of this software. They should also be more knowledgeable about filtering/monitoring software options and tools in order to help safeguard their children. To achieve this, parents should adapt more quickly to Internet technology and not shy away from it.



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