Children and the Internet: Between Freedom and Protection

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Abstract

The relationship between children and the Internet is important in public discourse to government and more broadly in society. Yet there is a tension between allowing children the freedom to explore the Internet and its benefits and protecting them from its harms. This study investigates the Internet usage habits of children in Egypt, comparing their experiences and motivations with their western counterparts. It investigates the process of parental monitoring in and outside of the home from the perspectives of both children and adults. The study investigates specifically the variable of gender in these issues and practices. It asks who is responsible for children's online protection: parents, governments, civil societies, ISPs, schools? It also offers a cross-cultural perspective on children's and parents' attitudes and responses to the growing number of children online.

Keywords: Internet*; children; parents; protection; freedom; gender; Egypt.*

Introduction

The Internet can greatly resource today's society benefiting many, and is duly promoted as a learning tool for youth. Many children use the Internet at home and elsewhere; it can be a wonderful experience, but also a risk. Similarly, some parents are happy their children use new media yet others are cautious. Are all parents aware of the possible dangers facing children online? To what extent are children supervised and how much freedom are they given? (Soeters, 2006)

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Indeed, children are clever at misleading their parents as mentioned on BBC News (2005); they are often the most highly sophisticated net users compared to other members of the family (Soeters, 2006). Much of the sense of risk centres on pornography: "Law enforcement authorities must be put in a position to effectively track down child pornography on the Internet" (Waltermann & Machill, 2000). But there is growing worry over peer-to-peer contact, including grooming by paedophiles, online bullying, sexual harassment and 'cyber-stalking' (Livingstone, 2003). Other phenomena, such as brainwashing, susceptibility to advertising and Internet addiction may isolate children from their peers (Tarrozzi & Bertolini, 2000; Arnaldo, 2001; Roche, 2005; Hargrave & Livingston, 2006). Developments in PDA (Personal digital assistant) and 3G mobile technologies are seen to have complicated supervision by allowing access outside the home.

In Egypt 75% of web users are between 11-30 years old (Kamel, 2008), and some parents still lack Internet skills and awareness of hazards. Who is responsible for children's online protection? What is the social context of Internet usage amongst Egyptian children? Who should be regulating the Internet? This is the scope of this study.

Literature Review

Among those with the responsibility for safeguarding children's Internet use are: young people themselves, governments, private sector entities, international agencies and civil society (ECPAT, 2005). This review offers a critical perspective on research surrounding the tension between control and freedom in supervising children's online activity.

Parental monitoring and parent-child communication patterns: Catalano et al. (1992) and Kafla & London (1991) have shown when quantity and quality of communication is good, adolescents' risk behaviour is lowered; Diaz et al. (2006) and Miller et al. (2006), proved that talking to children about risk behaviours limits them. Eastin et al. (2006) further

recommended that teachers educate children in web use, as they preferred disorientating advertisements be removed from children's sites. Yet Crouter and Head (2002) argue that in addition to communicating with children, parents should also monitor them. However, little is known about parental monitoring (Cottrell et al., 2007). One study recommended studying family rules from both parents' and children's perspectives, revealing that most parents reported regulating their teenagers' Internet use. But more parents reported monitoring (61%) than teenagers (38%). The study also indicated that younger parents showed higher levels of monitoring (Wang et al., 2005).

A further important study used the Parental Knowledge and Behaviour Inventory (PKBI) invented by Cottrell et al. (2007) to assess adolescents' and parents' perceptions of specific monitoring strategies. The sample showed 72.8% of parents said they placed computers in an open area compared to 67.7% of adolescents. 77% of parents reported limiting children's Internet usage compared to 59.8% of children. Parents (58%) and adolescents (59%) agreed on the use of blocking software (Cottrell et al., 2007). It is clear that the most knowledgeable parents construct a set of rules for their children's home Internet usage to ensure freedom in a protected environment.

Negative social impact on children: Gross et al. (2002) researched students from a middle class public school in California, revealing time spent online was not associated with wellbeing. A further study by Zhao (2006) tested the contradictory results of previous studies, suggesting there are different types of Internet usage related differentially to social connectivity. Social users have more social ties than nonusers compared with nonsocial users who did not differ statistically significantly from nonusers in network size. Another research evaluated the relationship between attention deficit-hyperactivity (ADHD) symptoms and 'Internet addiction' in South Korea. The ADHD group had higher Internet addiction scores (Yoo et al., 2004). These studies show the Internet does not have a clear impact socially (either positive or negative) on children, adolescents and even adults unless there is a previous problem.

The Dark side of the Web: In fact there are no reliable statistics of the number of children and adolescents who are victims of sexual exploitation (Barbosa, 2001). Allbon & Williams (2002) tested UK children's exposure to racial material, finding over 84% of age 11-16 school students use the Internet of whom 50% access it from home. 60% of the males reported unpleasant material compared to 28% of the females. 62% felt there was no need to fuss over protection. One researcher to offer a clear definition of child pornography discussed the real versus virtual child in relation to child pornography in Hong Kong. She pointed out it was common for families to share photographs of young children taken in a family setting, concluding the protection of children is the collective responsibility of parents, community and government (Ong, 2006). A further paper discussed teen addiction to online sexual activities, discovering stories of children and teens accessing inappropriate material online. It also found that problems generated from chat rooms, and warning signs of addiction according to Cooper et al, (1999) such as depression, isolation sense of pseudo intimacy; mood altering experiences and not engaging in any social activities (Robert, 2000).

Childrens' positive and negative motivations: One study surveyed 194 Dutch children aged 8 to 13 with home Internet access. It showed that most important was an attraction to computers, followed by need for information, and entertainment. Children described their positive experiences: 17% mentioned computer games or playing, 13% watching video clips and listening to songs, 12% visiting kids' entertainment sites. Regarding negative experiences, 10% reported a virus or a computer crash, 4% being faced by violence and 4% pornography. The researcher noted there were statistically significant age and gender differences (Valkenburg & Soeter, 2001). The results of (Chatbox, 2002) revealed most children use the Internet to play games, yet boys preferred violent games whilst girls solved mysteries or found treasures.

Child protection online: Hunter (2000) explored the effectiveness of filtering programs designed to protect children and recommended reconsidering the support for filtering

software. Hick & Halpin (2001) examined how the Internet links legal systems and achieves international collaboration, commenting that the web could not be a substitute for communities but that it does provide an effective means of communication.

The regulator's perspective: One study investigated self-regulation as a substitute to traditional media supervision (Machill & Hart, 2002). Similarly, Austin & Reed (1999) stressed the inability of children to make adult judgments about advertising, suggesting industry self-regulation to ensure ethical online space. Yet McCabe (2008) suggested ISPs must take ultimate responsibility for filtering content, with filtering software playing a subsidiary role. Another study, following the development of PDAs and 3G mobile phones, argued these "new forms of access for content may lead to quite different expectations regarding privacy and freedom of expression", raising new issues especially in the absence of a consensus concerning "whether and how to regulate the Internet content" for children's protection (Abhilash, 2006, p. 177).

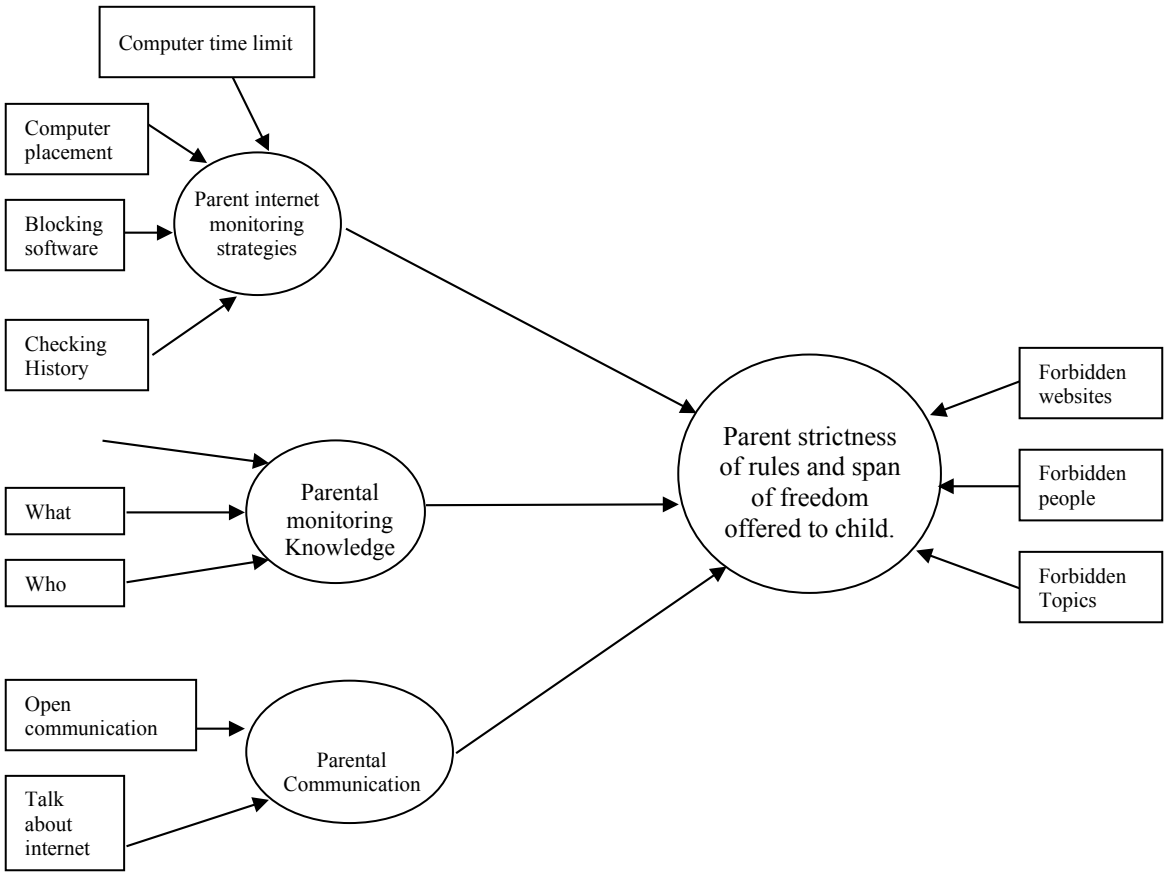
The aforementioned body of literature reveals that the question of whom is responsible for children's online protection is controversial, needing more focus on national and international responsibility and the process of parental supervision of children's Internet use.

Methodology

The objective of this research is to snapshot reality and investigate the environment of child Internet use. Quantitative methods (surveys) are employed with qualitative methods (interviews). Data is derived from baseline questionnaire responses collected in February and March 2008. A purposive sample of 400 Egyptian children from greater Cairo each with access to the Internet age (11-16) was chosen from various socioeconomic backgrounds. Those selected were equally distributed amongst 5 school categories (governmental, experimental,

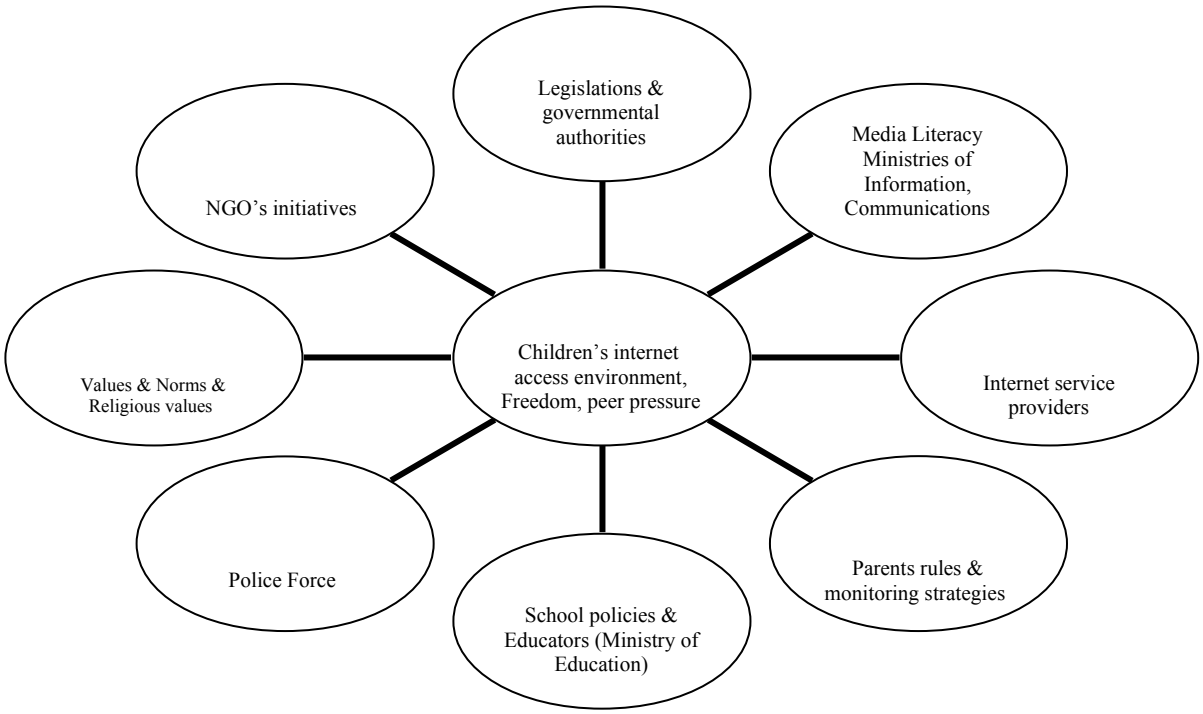
national language, international, Islamic schools) where 80 students have been chosen from each school category, distributed equally on gender type (40 males & 40 females from each school category). Another purposive sample consisted of 400 Egyptian parents from greater Cairo with children (age 11-16) accessing the Internet chosen from the same socioeconomic backgrounds and residential areas, distributed equally on gender type (200 males, 200 females). A purposive sample comprised 12 ICT teachers from different school management categories. The teachers sample was distributed where teachers were willing and had time.

This study tested parental awareness through Parental Knowledge and Behaviour Inventory "PKBI" (Cottrell et al., 2007), (see model 1). It tested the relations between various pairs of variables included in the parental monitoring strategies model (see model 1) from children's perspectives. It tested the different reacting relations between various pairs of variables included in the parental monitoring strategies from parent's perspectives.



Model 1: Parental Internet Monitoring Knowledge

The research has developed a model (see model 2) for Egyptian children's Internet access environment, derived from models of Typologies of Filter systems, ICRA rating and filtering system, (Machill et al., 2002).



Model 2: Child environment for Internet Usage.

Results

The results are split into three sections, comprising children's, parents' and teachers' responses, and followed by a general discussion.

The relations between children/adolescent's survey variables:

Table (1): The relation between place of Internet access and perception of child to the use of parental control software.

Using parental control software	Home Internet access		Other Internet access		Total	
Yes	42	32.6%	49	18.1%	91	22.8%
No	36	27.9%	60	22.1%	96	24%
Do not know	51	39.5%	162	59.8%	213	53.3%
Total	129	100%	271	100%	400	100%

Chi-square=15.988, DF=2, Significance=0.000, Contingency coefficient=0.196

The table above shows a statistically significant relation between the place of children's Internet access and their perception of parental control software. 24% of users either at home or elsewhere are sure they are not protected, while 51% of home users do not know, which means protecting computers at home will not fully ensure safety, as self-monitoring is important.

Table (2): The relation between place of Internet access and parental rules.

Parental rules	Home access		Other access		Total	
Yes	80	62%	102	37.6%	182	45.5%
No	49	38%	169	62.4%	218	54.5%
Total	129	100%	271	100%	400	100%

Chi-square =20.944, DF=1, Significance =0.000, Contingency coefficient =0.223

The table above shows there is a statistically significant relation between the two variables where 62% of the children who access the Internet at home reported their parents have set rules, while 38% said their parents had never made such. The table also shows a statistically significant relationship between place of Internet access and the presence of parental rules, where it appears most children who access at home have parental rules and most others who access elsewhere have none.

Table (3): Parents' rules for children who access the Internet at home.

Time of access		**Duration limits**		**Place limits**		**Forbidden sites**	
Yes	**No**	**Yes**	**No**	**Yes**	**No**	**Yes**	**No**
60	**20**	**70**	**10**	**49**	**31**	**69**	**11**
75%	**25%**	**87.5%**	**12.5%**	**61.3%**	**38.8%**	**86.3%**	**13.8%**
N=80							

It is apparent from the table that the most important rule for parents is duration of access, as 87.5% had set time limits. 75% had set certain times of the day, perhaps to ensure supervision. Nearly 40% could access the Internet from their bedrooms, which is not recommended.

Table (4): Relation between freedom given to children and their access location.

Degree of freedom given by parents	**Location of access**				**Total**	
	Home access		**Other access**			
High	**62**	**48.1%**	**56**	**20.7%**	**118**	**29.5%**
Moderate	**58**	**45%**	**156**	**57.6%**	**214**	**53.5%**
Low	**9**	**7%**	**59**	**21.8%**	**68**	**17%**
Total	**129**	**100%**	**271**	**100%**	**400**	**100%**

Chi –square= 36.086, DF=2, Significance=0.000, Contingency coefficient=0.288

The table above shows a statistically significant relationship between the place children access the Internet *and* their perspectives concerning the degree of freedom given by their parents. Unexpectedly, nearly half with home access (48.1%) think they have a high degree of freedom compared to 20.7% who access elsewhere.

Table (5): Relation between children's need for more freedom and place of access.

Need for more freedom to Internet access	**Home access**		**Other access**		**Total**	
Yes	**17**	**13.2%**	**10**	**37.3%**	**118**	**29.5%**
No	**112**	**86.8%**	**170**	**62.7%**	**282**	**70.5%**
Total	**129**	**100%**	**271**	**100%**	**400**	**100%**

Chi –square-=24.389, DF=1, Significance=0.000, Contingency coefficient =0.240

The table above shows a statistically significant relationship between the place of child access and his/her need for more freedom. This relation is directly proportional to refusing the need of more freedom levels, especially for home users where 86.8 % did not want more level of freedom compared to 62.7% of non home users. This relation shows 70.5% do not want more freedom.

Table (6): The relation between parents as a source of information about Internet hazards and their children's perception of their usage to protecting software.

Using parental control software	Children told by their parents about Internet hazards		Children told about Internet hazards from other source		Total	
Yes	**59**	**59.6%**	**23**	**21.7%**	**82**	**40%**
No	**20**	**20.2%**	**24**	**22.6%**	**44**	**21.5%**
Do not know	**20**	**20.2%**	**59**	**55.7%**	**79**	**38.5%**
Total	**99**	**100%**	**106**	**100%**	**205**	**100%**

Chi-square=35.224, DF=2, Significance=0.000, Contingency coefficient=0.383

The above table shows a statistically significant relation of moderate strength between parents who use protective software and those who talked to their children about Internet hazards. Only 40% of all respondents to this question (205 children) who have heard about Internet dangers are protected by their parents (use parental control software), and of the children (205) who have heard about Internet hazards. There is no evidence they are educated to deal with them.

Table (7): Relation between children told about Internet hazards by parents and their perception of freedom's level offered to them.

Level of freedom	Children told about Internet hazards by parents		Children told about Internet hazards from other source		Total	
High	**43**	**43.4%**	**35**	**33%**	**77**	**38%**
Moderate	**43**	**43.4%**	**57**	**53.8%**	**100**	**48.8%**
Low	**13**	**13.1%**	**14**	**13.2%**	**27**	**13.2%**
Total	**99**	**100%**	**106**	**100%**	**205**	**100%**

Chi square=2.582, DF=2, Significance=0.275

The table above shows a non-statistically significant relation between the children who have been told information about Internet hazards by their parents and their perception of the level of freedom given them.

Table (8): Relation between school category and level of freedom parents offer.

Level of Freedom offered by parents	School Category										Total	
	National Language		Experimental		International		Governmental		Islamic			
High	26	32.5%	22	27.5%	37	46.3%	20	25%	13	16.3%	118	29.5%
Moderate	44	55%	43	53.8%	39	48.8%	42	52.5%	46	57.5%	214	53.5%
Low	10	12.5%	15	18.8%	4	5%	18	22.5%	21	26.3%	68	17%
Total	80	100%	80	100%	80	100%	80	100%	80	100%	400	100%

Chi-square=27.221, DF=8, Significance=0.001, Contingency coefficient=0.252

The table above shows a statistically significant relation between school category and freedom level, where the relation is strongest with the international schools (46.3%) in terms of high freedom levels followed by national language schools (32.5%), governmental (25%), and Islamic schools (16.3%), indicating that faith based schools display an anti Internet attitude.

Table (9): Relation between gender and level of freedom parents offer at Internet usage.

Freedom level	Gender				Total	
	Male		Female			
High	67	33.5%	51	25.5%	118	29.5%
Moderate	105	52.5%	109	54.5%	214	53.5%
Low	28	14%	40	20%	68	17%
Total	200	100%	200	100%	400	100%

Chi-square=4.362, DF=2, Significance=0.113

The above table shows a non-statistically significant relation between gender and freedom level offered by parents of children surfing the Internet. It is clear that the females are offered slightly lower level of freedom compared with males 20% versus 14% at the low freedom zone.

Table (10): Relation between strictness of parental rules and gender type.

Strictness of parental rules	Gender				Total	
	Male		Female			
Very Strict	52	26%	51	25.5%	103	25.8%
Strict	48	24%	68	34%	116	29%
Flexible	62	31%	56	28%	118	29.5
Very Flexible	38	19%	25	12.5%	63	15.8
Total	200	100%	200	100%	400	100

Chi square=6.446, DF=3, Significance=0.092

The above table shows a non-statistically significant relation between the gender type and level of parental rules strictness related to Internet usage. It is clear a greater percentage of males (19%) have more flexible parental rules compared with the females (12.5%)

The Relations between Parents' Survey Variables

Table (11): The relation between using parental control software and children having bad experiences with the Internet.

Using Parental control Software	**Parents perceptions child had a bad experience with the Internet**				**Total**	
	Yes		**No**			
Yes	**2**	**22.2%**	**59**	**15.1%**	**61**	**15.3%**
No	**7**	**77.8%**	**332**	**84.9%**	**339**	**84.8%**
Total	**9**	**100%**	**391**	**100%**	**400**	**100%**

Chi-square=0.346, DF=1, Significance=0.556

The table above shows a non-statistically significant relation between using parental control software and children who experienced something negative on the Internet. It is clear that only two out of 61 children whose parents use parental software have experienced something negative online, suggesting they might have accessed inappropriate material away from the protected computers at home; compared with seven children out of 339 whose parents do not use parental control software.

Table (12): The relation between checking the history and children having bad experiences with the Internet.

Checking the history	**Parents perceptions child had a bad experience with the Internet**				**Total**	
	Yes		**No**			
Yes	**0**	**0.0%**	**16**	**4.8%**	**16**	**4.7%**
No	**6**	**100%**	**319**	**95.2%**	**325**	**95.3%**
Total	**6**	**100%**	**335**	**100%**	**341**	**100%**

The table above shows that none of the parents who checked their children's online history had perceived that their children had any bad experience online.

There is a strong correlation between checking history and children without bad experiences online, indicating this strategy might be effective as a monitoring procedure.

Table (13): The relation between parents' knowledge of Internet hazards and setting rules for their children to access the Internet.

Setting rules	Parents knowledge with Internet hazards				Total	
	Yes		No			
Yes	113	34.7%	9	12.2%	122	30.5%
No	213	65.3%	65	87.8%	278	69.5%
Total	326	100%	74	100%	400	100%

Chi-square=14.404, DF=1, Significance=0.000, Contingency coefficient=0.186

The table above shows a statistically significant relation between parents' knowledge and setting rules for their children's access to the Internet, where unexpectedly the relation is inversely proportional between knowledge and setting rules.

Table (14): The relation between parents' knowledge of Internet hazards and using parental control software.

Using parental control software	Parents knowledge with Internet hazards				Total	
	Yes		No			
Yes	61	18.7%	0	0%	61	15.3%
No	265	81.3%	74	100%	339	84.8%
Total	326	100%	74	100%	400	100%

The table indicates that none of the parents who have no knowledge about Internet hazards have used protecting programs, while only 18.7% who do know about them have, indicating that knowledge is not enough to encourage using protection programs. There may be an intervening variable in owning the computer at home.

Table (15): The relation between parents' knowledge of Internet hazards and communicating/educating their children about Internet hazards.

Communicating with their children	Parents knowledge with Internet hazards		Total	
	Yes			
Yes	184	56.4%	184	56.4%
No	142	43.6%	142	43.6%
Total	326	100%	326	100%

The above table shows the non-statistically significant relation between parents' knowledge of Internet hazards and communicating with their children about safety. The data indicates that not all parents who are aware of Internet hazards have communicated with their children.

Table (16): The relation between parents' setting rules for Internet access and parental communication/education about Internet hazards.

Setting rules	Parental communication about Internet hazards				Total	
	Yes		No			
Yes	76	41.3%	37	26.1%	113	34.7%
No	108	58.7%	105	73.9%	213	65.3%
Total	184	100%	142	100%	326	100%

Chi-square=8.228, DF=1, Significance=0.004, Contingency coefficient=0.157

The table above shows a statistically significant relation between parents who have set rules for their children and those who have told them about Internet hazards, where the relation is strongest with not setting rules for children's Internet access. It is clear that 58.7% of those who communicated with their children have depended on this tactic and preferred to not set rules. Also 73.9% of the parents who did not communicate with their children about hazards did not set any rules for access.

Table (17): The relation between using parental control software and parental communication/education about Internet hazards.

Using parental control software	**Parental communication about Internet hazards**				**Total**	
	Yes		**No**			
Yes	**53**	**28.8%**	**8**	**5.6%**	**61**	**18.7%**
No	**131**	**71.2%**	**134**	**94.4%**	**265**	**81.3%**
Total	**184**	**100%**	**142**	**100%**	**326**	**100%**

Chi-square=28.289, DF=1, Significance=0.000, Contingency coefficient=0.283

The table above shows a statistically significant relation between the parents who use parental control software and those who educate their children about Internet hazards where the relation is inversely proportional; between parental communication and using protective software, as data indicates that only 28.8% of the parents who communicated with their children have used protection software. The majority of parents who communicate to their children (71.2%) preferred not to use parental control software and it seems that those parents have depended on the information they have passed to their children in order to protect themselves without using software.

Table (18): The relation between parents' perceptions of their strictness and communicating with their children about Internet hazards.

Parental comm. about Internet hazards	Parents perceptions of the strictness of their rules										Total	
	Very strict		Strict		Moderate		Flexible		Very flexible			
Yes	16	80%	47	66.2%	7	33.3%	74	53.2%	40	53.3 %	184	56.4
No	4	20%	24	33.8%	14	66.7%	65	46.8%	35	46.7%	142	43.6%
Total	20	100%	71	100%	21	100%	139	100%	75	100%	326	100%

Chi-square=12.7, DF=4, Significance=0.013, Contingency coefficient =0.19

The table above shows a statistically significant relation between parents' perceptions of the range of strictness/flexibility of rules they have set for access and communicating with their children about hazards, where it is clear that communicating with children about hazards is directly proportional to the level of strictness. The data indicates that 80% of very strict parents have communicated with their children and educated them how to avoid dangers on the Internet. 66.2% of strict parents have done the same, compared to only 33% of moderate parents; while it increases again with flexibility where 53.2% and 53.3% of the flexible and very flexible parents respectively have also communicated with their children. More than half of parents (56.4%) have tried to educate their children about Internet hazards.

Table (19): The relation between setting rules for child's Internet access and parental worries concerning gender type.

Parental rules for Internet access	Parental worries concerning gender type				Total	
	Yes		No			
Yes	61	32.8%	61	28.5%	122	30.5%
No	125	67.2%	153	71.5%	278	69.5%
Total	184	100%	142	100%	400	100%

Chi-square=0.864, DF=1, Significance=0.353

The table above shows a non-statistically significant relation between parents who viewed gender type as affecting their degree of worry and setting rules for access, where only 32.8% who felt worries regarding gender type have set rules versus 67.2 %; which means that gender worries do not affect monitoring or protective strategies.

Table (20): The relation between setting rules for place of child's Internet access at home and parental worries concerning gender type.

Place limit	Parental worries concerning gender type				Total	
	Yes		No			
No	50	82%	40	65.6%	90	73.8%
Yes	11	18%	21	34.4%	32	26.2%
Total	61	100%	61	100%	122	100%

Chi-square=4.236, DF=1, Significance=0.040, Contingency coefficient=0.183

The table above indicates there is a statistically significant relation between parents' worries regarding gender type and the placement of the computer at home, where the relation is inversely proportional. 82% of parents who worry about gender type versus only

18% of those parents where the data in this table agrees with that of the previous one, that parents' worries are not transferred to protection or parental monitoring strategies.

Table (21): The relation between using parental control software and parental worries concerning gender type.

Using parental control software	**Parental worries concerning gender type**				**Total**	
	Yes		**No**			
Yes	**29**	**15.6%**	**32**	**15%**	**61**	**15.3%**
No	**157**	**84.4%**	**182**	**85%**	**339**	**84.8%**
Total	**61**	**100%**	**214**	**100%**	**400**	**100%**

Chi-square=0.31, DF=1, Significance=0.859

The table above indicates there is a non-statistically significant relation between parents' worries regarding gender type and using software, where 84.4% of parents who worry about gender did not use parental control software, which indicates that the protective procedures among those parents is limited.

Table (22): The relation between parents' age and setting rules for children's Internet access.

Setting Rules	**Parents' age group**								**Total**	
	30-35		**35-40**		**40-45**		**45-50**			
Yes	**19**	**22.9%**	**37**	**30.6%**	**38**	**32.2%**	**28**	**35.9%**	**122**	**30.5%**
No	**64**	**77.1%**	**84**	**69.4%**	**80**	**67.8%**	**50**	**64.1%**	**278**	**69.5%**
Total	**83**	**100%**	**121**	**100%**	**118**	**100%**	**78**	**100%**	**400**	**100%**

Chi-square=3.699, DF=3, Significance=0.296

The table above shows a non-statistically significant relation between the age of parents and setting rules for a child's Internet access at home, where most parents (69.5%) regardless of the age group have not set any rules, as it is clear from the data that the age group of the parents is not related to setting rules.

Table (23) : The relation between parents' age and checking the history.

Checking the history	Parents' age group								Total	
	30-35		35-40		40-45		45-50			
Yes	1	1.4%	3	2.9%	8	7.8%	4	6.3%	16	4.7%
No	70	98.6%	100	97.1%	95	92.2%	60	93.8%	325	95.3%
Total	71	100%	103	100%	103	100%	64	100%	341	100%

Chi-square=4.966, DF=3, Significance=0.174

The table above shows a non-statistically significant relation between the parents' age group and checking the history of the children's activities on the Internet, where the majority of parents did not check the history regardless of their age group. This implies that it is not related to age but awareness, knowledge and computer and Internet experiences.

Table (24): The relation between parents' age and using control software.

Parental control software	Parents' age group								Total	
	30-35		35-40		40-45		45-50			
Yes	9	10.8%	20	16.5%	18	15.3%	14	17.9%	61	15.3%
No	74	89.2%	101	83.5%	100	84.7%	64	82.1%	339	84.8%
Total	83	100%	121	100%	118	100%	78	100%	400	100%

Chi-square=1.840, DF=3, Significance=0.606

The table above shows a non significant relation between the parents' age groups and using a parental control software where the age group ranked first was 45-50 followed by 35-40 then 40-45 then 30-35, contradicting the expectation that the younger parents would be more knowledgeable.

Table (25): The relation between parents' age and communicating /educating children how to deal with Internet hazards.

Using parental control software	Parents' age group								Total	
	30-35		35-40		40-45		45-50			
Yes	18	32.7%	62	60.8%	60	57.7%	44	67.7%	184	56.4%
No	37	67.3%	40	39.2%	44	42.3%	21	32.3%	142	43.6%
Total	55	100%	102	100%	104	100%	65	100%	326	100%

Chi-square=16.776, DF=3, Significance=0.001

The above table shows a statistically significant relation between the parents' age group and telling their children about Internet hazards together with trying to educate them in how to deal with it. The maximum percentage of communicating with children existed in age group 45-50 where 67.7% of respondents have communicated with their children. We could conclude that the older age groups of parents are more experienced in bringing up children.

Table (26): The relation between educational level of parents and setting rules for their children's Internet access.

Setting rules	Educational level								Total	
	Read/write		Intermediate		University graduate		Post graduate			
Yes	1	11.1%	23	21.9%	86	33.6%	12	40%	122	30.5%
No	8	88.9%	82	78.1%	170	66.4%	18	60%	278	69.5%
Total	9	100%	105	100%	256	100%	30	100%	400	100%

Table (26): The relation between educational level of parents and setting rules for their children's Internet access.

Setting rules	Educational level								Total	
	Read/write		Intermediate		University graduate		Post graduate			
Yes	1	11.1%	23	21.9%	86	33.6%	12	40%	122	30.5%
No	8	88.9%	82	78.1%	170	66.4%	18	60%	278	69.5%
Total	9	100%	105	100%	256	100%	30	100%	400	100%

Table (27): The relation between educational level of parents and using parental control software.

Using parental control software	Educational level								Total	
	Read/write		Intermediate		University graduate		Post graduate			
Yes	0	0%	1	1%	48	18.8%	12	40%	61	15.3%
No	9	100%	104	99%	208	81.3%	18	60%	339	84.8%
Total	9	100%	105	100%	256	100%	30	100%	400	100%

The above two tables show non-statistically significant relations between educational level of parents, setting rules and child protection in terms of parental control software.

Table (28): The relation between educational level of parents and checking the history.

Checking the history	Educational level								Total	
	Read/write		Intermediate		University graduate		Post graduate			
Yes	0	0%	4	5.1%	12	5.1%	0	0%	16	4.7%
No	3	100%	75	94.9%	223	94.9%	24	100%	325	95.3%
Total	3	100%	79	100%	235	100%	24	100%	341	100%

The table above shows a non-statistically significant relation between the educational level of the parents and checking the history of what their children were doing on the Internet. It is apparent that parents who checked the history are university graduates and intermediate level education. This is contrary to what was expected, i.e. that as educational level increases the probability of checking the history increases, but it seems that there are intervening variables such as having more experience with the Internet and knowledge of using that technique.

Table (29): The relation between educational level of parents and communicating/ educating their children how to deal with Internet hazards.

Communicating with children	**Educational level**								**Total**	
	Read/write		**Intermediate**		**University graduate**		**Post graduate**			
Yes	**0**	**0%**	**23**	**31.5%**	**137**	**61.7%**	**24**	**80%**	**184**	**56.4%**
No	**1**	**100%**	**50**	**68.5%**	**85**	**38.3%**	**6**	**20%**	**142**	**43.6%**
Total	**1**	**100%**	**73**	**100%**	**222**	**222%**	**30**	**100%**	**326**	**100%**

The table above shows the relation between the educational level of parents and communicating and educating their children about Internet hazards and the means of dealing with them. It reveals that communication with children increases as the educational level increases, where the most educated parents have the highest level (80%) for the post graduate level, followed by 61.7% from the university level, and 31.5% from the intermediate level, and none from those are unable to read and write, where it is apparent that communicating with children about Internet hazards correlates with the parents' educational level.

Table (30) : The relation between educational level of parents and image of Internet among them.

Image of the Internet	Educational level								Total	
	Read/write		Intermediate		University graduate		Post graduate			
Very dangerous	1	11.1%	2	1.9%	9	3.5%	3	10%	15	15.3%
Dangerous	0	0.0%	12	11.4%	51	19.9%	3	10%	66	16.5%
Moderate	1	11.1%	24	22.9%	8	3.1%	0	0.0%	33	8.3%
Useful	6	66.7%	51	48.6%	125	48.8%	12	40%	194	48.5%
Very useful	1	11.1	16	15.2%	63	24.6%	12	40%	92	23
Total	9	100%	105	100%	256	100%	30	100%	400	400

The table above shows how parents with different educational levels view the Internet for their children. The data indicates that there is a non-statistically significant relation between the 2 variables of the table; also it is clear that the majority of parents view the Internet as useful for their children in spite of their different educational level.

Table (31): The relation between parent's gender and using parental control software.

Using parental control software	Parent's gender type				Total	
	Male		Female			
Yes	28	14%	33	16.5%	61	15.3%
No	172	86%	167	83.5%	339	84.8%
Total	200	100%	200	100%	400	100%

Chi-square=0.484, DF=1, Significance=0.487

The above table shows a non-statistically significant relation between parents' gender type and their answers concerning parental control software, which might be a mutual decision between every pair of parents.

Table (32): The relation between parent's gender and communicating/educating children dealing with Internet hazards.

Communication	Parent's gender type				Total	
	Male		Female			
Yes	100	59.2%	84	53.5%	184	56.4%
No	69	40.8%	73	46.5%	142	43.6%
Total	169	100%	157	100%	326	100%

Chi-square=1.064, DF=1, Significance=0.302.

The table above shows a non-statistically significant relation between parent's gender type and communicating and educating children on how to deal with Internet hazards. Data indicates that the percentage of male parents (59.2%) communicating with their children is slightly higher than the females (53.5%) which may be due to males' knowledge with Internet usage exceeding the females'.

The Relations between Teachers' Survey Variables

This section explores the survey responses of a small sample of teachers. 41.7% (5 out of 12) teachers reported using the Internet as a lesson tool. 25 % (3 out of 12) teachers mentioned having Internet protection at school. One private language school teacher reported school blocks and two international school teachers mentioned the web sense program.

Two teachers from International schools mentioned educating students on how to be safe online. Four teachers reported efforts on the part of individual teachers. 50 % (6 out of 12) of teachers have felt the worries of parents concerning children's online safety. 41.7% (5 out of 12), all from private language schools, reported accidents occurring at their schools, and three teachers (25%) mentioned that some students have accessed pornography sites. 16.7% (2 out of 12) proposed schools should monitor and protect its students.

Discussion

The discussion explores how the cultural context may influence children's motives and experience of Internet usage, comparing Egyptian children (this study's focus) with western ones (explored in the literature review).

Most Egyptian children access the Internet from Internet cafes (63.7%) compared with western children who use home and school access more frequently. It has to be noted that Internet cafes are the least monitored places especially for children and adolescents when compared to 42.8% reporting access at school. However, access at home appears to safer, where 32.3% of children reported home access only. Yet, parents might be deceived by the safety of their children being at home, since 54.3% of children who access at home reported being in their bedrooms, where parents are not aware of the dangers that might confront their children while unsupervised.

When comparing Egyptian children's motives for Internet usage to their western counterparts, significant difference is found: 99.3% access for entertainment, 51% for information, and 31% for school homework. When asked which activities they preferred, 93% preferred playing games (most of them are western made, English language, originally made for their native children). 65.8% prefer chatting, which is dangerous with strangers, and only 5.5% reported accessing their facebook accounts for social networking.

However, Dutch researcher Valkenburg (2001) found children ranked the need for information as paramount in accessing the Internet, entertainment came second, followed by online social interaction; where it is obvious the need for information is less important for Egyptian children. This research did not reveal many statistically significant differences among different genders regarding motive, despite games which more males preferred than females, which contradicts with findings of the Dutch research where statistically significant differences were revealed among different genders. Soeters (2006), revealed children were well taught not to give personal information, while this research revealed 48.8% have never

heard about Internet hazards. Consequently they do not know how to behave safely online. Of those who have heard about Internet hazards, 71% have acquired their information from their peers, which is unreliable when compared to safety measures and ideal means of behaving online.

Children's perceived parental monitoring strategies: (80) respondents only (20%) of the sample, reported that they were monitored by their parents, where 87.5 % of them have time limits for their duration on the Internet, 61.3% of them have got place limits, also 86.3% reported that there were forbidden sites, but this is a very small ratio when compared to the whole sample size, which reveals that parental monitoring is too small when compared to the western societies. The American study of Cottrell (2007) revealed that 72.8% of the sample which comprised 448 children shows they have received rules related to place of Internet access, while 77% have rules related to time limit on the Internet.

Parental reported monitoring strategies: When parents were asked if ever they set any rules for their children's access to the Internet, only (122 parents) 30.5% reported that they put rules for their children when accessing the Internet. The remaining 69.5% reported that they never put rules for their children when accessing the Internet. This implies very low degree of awareness to Internet hazards especially that this percentage corresponds to the children's sample results: only 20% reported that they receive partial monitoring implying that all of them receive all the monitoring strategies from the parents. This contradicts with their western counterparts in America: The study of Cottrell (2007) have shown that 72.8% (of 448 participant)of the parents place the computer in an open area, 77% limit the time of their children on the Internet, 58% use blocking software, 67% search the history of their children's activities online. This study shows that out of the 30.5% of parents who set rules only 26.2% (of 122 respondent to that question) - equivalent to 8% of the whole sample size - have set rules for computer placement at home. However, 66.8% of parents (out of 250) of children with home Internet access have reported that placing the computer in the living room didn't have any deliberate purpose related to child monitoring.

Apart from the 8% of the parents mentioned earlier, only 17.5 % of those parents have reported their children bedroom access to the Internet, while only 22% of the whole sample have limited the time of their children on the Internet. Only 15.2% of the parents reported that they use blocking software. This implies an awareness gap between Egyptian and western parents. Undoubtedly the media, schools and the cultural context together with the spoken language (especially English is not the first language in Egypt) play an important role in raising children's and parental awareness to such issues.

However, when comparing place of computer access at home between parents and children reports it seems different; yet when calculating the percentage of bedroom access to the whole sample it was discovered in the children's sample that 17.5% (70 children) corresponding with the parents' reports where 70 parents reported their children's bedroom access. However, 66.8% (41.8% of the whole sample) parents reported that their children access the Internet from the living room compared to 41.1% (13.3% of the whole sample) of the children's reports.

Children's perceived freedom levels compared to parents': 17% of children reported low levels of freedom, which corresponds to 13.8% of parents reporting similarly.

Children's bad experiences and parental worries: 5% of children reported bad experiences compared to only 2.3% of parents. These figures contradict western researches, which suggest both children and parents are embarrassed to mention such experiences (Soeters, 2006). 36% of children were faced by pornography, 22% by violence, 23% experienced viruses, 5% faced A threats, 8% B threats. Also, Ong (2006) mentioned that 49% of children in Scotland have engaged in a sexually explicit conversation in a chat room, whilst 19% of 10-17 year olds have experienced an unwanted sexual solicitation. Although Egyptian parents have listed pornography as the first danger they fear, we find the cultural context plays a big role in the dangers priority list of parents, as those in the West fear paedophiles.

Gender, age differences and socioeconomic status: There was a statistically significant relation between gender type and degrees of Internet freedom. 82.3% of parents mentioned they felt more worried for girls, which is a custom of Arabian culture where girls receive more restrictions than boys. These results correspond with the western cultures where Crouter and Head (2002) have shown female adolescents perceived themselves to be more monitored than their male counterparts.

Subjects responsible for child protection on the Internet: When parents were asked about who was responsible for child protection only 32.5% reported it was a parent's responsibility, 80.7% mentioned schools, 61.1% child care organizations, 55.2% ISPs, 53.3% said religion organizations (mosques and churches), 29.3% telephone companies, 11.5% mass media, and only 0.7% said it was government's responsibility. On the other hand YPRT (2007) revealed parents in the first rank followed by teachers and social youth workers, then policy makers, companies, and finally the police. However, the police were never mentioned by Egyptian parents. When experts were asked about children's protection, educating and empowering children came first, followed by confining children's access to only age-appropriate areas of the Internet. This could not be achieved without adult supervision, but it is clear that the majority of parents in this study do not want to take this responsibility. However, Muir (2005) views that a range of bodies should be responsible and should act to safeguard children: 1-governments, 2- private sector entities, 3-International agencies (eg. childnet), 4-civil society, 5-parents and families, 6-young people themselves, and recommended strong collaboration.

ISPs have been introduced as one of the subjects responsible for child protection online, where McCabe, (May, 2008) explored the partnership between ISPs and US law enforcement. Such studies could be useful in Egypt. However, Machill (2002) has considered self-regulation as a substitute to traditional media supervision, developing a new user-centered paradigm to enable users worldwide to block Internet content they consider

undesirable. The issue of who is responsible for child protection is still controversial and needs better research focus.

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