Multi-dimensional Challenges Facing Digital Youth and their Consequences

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Abstract—**The Internet continues to be a dynamic and incredibly powerful source of information with almost limitless capabilities for improving access to knowledge and connecting people around the world. It is also seen as a solution to addressing many social development issues by providing access to healthcare, remote learning opportunities, access to e-government services and innovative and higher paying jobs. With advancements in ICTs resulting in the transformation of the technological, economic, social, political, cultural, and educational realms, the world is fast becoming the proverbial 'global village'. The children and youth who are the major beneficiaries of this technology boom, who are the subject of this paper, are referred to as 'young digital citizens'. The emergence and widespread adoption of ICTs has greatly influenced the lifestyles of these young digital citizens, given the plethora of information on the Internet to which they have access. While the cyber world acts as a great resource on one side, it also has a sinister aspect, to which vulnerable and trusting digital youth can be subjected, both intentionally and unintentionally. The impact of the Internet can be extrapolated into four main aspects, namely: social, physical, psychological and moral (including ethical and religious). It is the aim of this paper to discuss the impact of these potential threats and the challenge they present to society and governments in creating a safe and secure environment.**

Keywords – Internet; digital youth; challenges; cyber threats, ICT (Information Communication Technogy, incl. telephones, mobile phones, computers, internet and other media)

I. CHALLENGES FOR THE DIGITAL YOUTH

With advancements in ICTs resulting in the profound transformation of a great many areas of life, the present generation of 'young digital citizens' is connected to the world via a multitude of sources from early in their development.

However, being exposed to technology from an early age and remaining connected in one way or another 24/7 brings with it a fresh set of challenges. Research conducted over the past decade in the United States, United Kingdom and the Philippines is beginning to demonstrate a correlation between connectivity to 'the Internet and the computer', and numerous potentially negative effects in a small section of children that could impinge on their health and emotional well-being. A recent report published by the National Academy of Sciences, Azerbaijan (2010), entitled 'Evaluation of the destructive and negative effects of using computers, the Internet and computer games on students' draws attention to the fact that in some cases, excessive use of computers, the Internet and computer games could have a negative impact on a child's health in physical, psychological and social terms. This is reflected also in the growing concern regarding the apparent increase in obesity in children, which is believed to be caused in part by their continuous use of computers and the Internet, which entails their sitting for extended periods of time. Concern about this influence is also discussed in a report commissioned by the UK Department for Children, Schools, and Families (DCSF) in 2007. Additionally, in 2008, the DCSF commissioned the *Byron Review*, which extensively examined and discussed the issue of the safety of children in the digital world. The report highlighted concerns about the growing risk of Internet-mediated sexual exploitation, along with its wider potential effects on the sexual and psychological health of children. Nonetheless, the review pointed out that the findings must be kept in perspective to the benefits that the Internet also brings. Most recently, eWWG has initiated a nation-wide survey in the UK to understand the uses, experiences and impact on the young digital citizens from the internet. The initial results from 600 students (age 13 – 16 years) in London, indicated that cyber bullying, online fights and conflicts, and biased and racist comments are the greatest challenges for young digital citizens, influencing them psychologically and physically.

Synthesising the current statistics and debates on the potential multi-faceted threats from the Internet, four main dimensions of impact can be discerned: *social*, *physical*, *psychological* and *moral (incl. ethical and religious)*. These present a sizeable challenge to both families and states in ensuring that the digital youth are provided with a safe and secure online environment. The section below provides an overview of each of these dimensions, in turn.

A. Social Challenges

Over the last decade, there has been much debate about the social implications of ICTs for the young. In fact, some research argues that children as young as nine are beginning to exhibit signs of maladjustment in society due to poor interpersonal skills. Others argue that the continuous use of computers by children inhibits the extent of their engagement in physical activities like playing with other children and exposure to social behavioural patterns

that occur in a natural environment. An additional argument that has been advanced by some asserts that children who spend a lot of time on computers tend to remain isolated and aloof on the playground and at school (Soltani, 2010). Another negative effect has been the emergence of so-called 'cyber bullying'. Similarly, some concerns over the issue of social dis-functionality have been identified by other researchers in the UK, who highlight possible dangers of children who continuously engage with the Internet and computer games becoming introverted and having reduced social cohesion and human relations (Byron, 2008; Valentine *et al.*, 2002). Lastly, the young digital citizen is now being exposed to a new form of sexual predator that has embedded itself in cyberspace, raising a new challenge for parents and the community at large to grapple with. In fact, cultural and social clashes between generations have been evident in almost every family for decades. Nonetheless, it could be argued that the Internet is further influencing the gaps between the understanding and acceptance of social norms, cultural values, behaviour and respect in some societies.

B. Physical Challenges

Despite the fact that only a small section of the children who use the Internet are subjected to sexual or physical abuse as a result of it, significant efforts are underway to increase awareness of the potential dangers and to equip the digital youth with the necessary resilience and skills to address these new threats. More and more research is also being conducted to identify the causes of the global increase in childhood obesity. Two major factors have arguably contributed to this phenomenon: the globalisation of fast food and the increasingly sedentary lifestyle of the digital youth, who tend to shy away from sports and other physical activities in favour of surfing the Internet using their computers or mobile electronic gadgets.

Some research has suggested that being 'hooked on to the computer' for long hours is also affecting other aspects of children's health, specifically their eyes, hands, arms and backs, with many ending up with postural problems. A recent study of elementary and high school students by the University of Cordilleras in Philippines indicated a possible correlation between the use of ICTs and incidence of obesity (Cruz *et al.*, 2009). The results also revealed that the extensive use of television, video games, computers and the Internet could be one of the main causes of obesity among children in the Philippines. Similarly, Soltani (2010) notes that the continuous use of computers and the Internet causes physical complications such as vision problems, joint, muscular and skeletal system ailments, obesity, skin problems, stress and neurotic-psychic issues, along with breathing complications. He further states that children and teenagers who spend long hours in chat rooms and playing computer games can develop mental disorders. Such concerns and findings are also now appearing in research conducted in the UK and US, leading to new problems for parents and the state to address. In fact, many governments have taken note of the matter and have responded with a plethora of

initiatives to tackle obesity, one of which is to lure children back to the games field and to encourage them to have healthier diets.

According to a 2004 study conducted by the National Sleep Foundation (NSF) in the US, having a television in the bedroom was a major cause of sleep disruption for children. There is also a growing debate in the UK regarding the fact that children are now beginning to sleep with four or five electronic devices, like a television, computer, mobile phone and so on, in their bedrooms, all of which emit electromagnetic radiation that may contribute to disturbed sleep. The full impact of this is still unknown and further research is being conducted in an effort to understand possible long-term consequences.

C. Psychological Challenges

The Internet has recently come under attack as being the cause of a number of psychological problems in children today. It has been argued that the continuous bombardment of certain types of inappropriate materials and discussions is causing a tremendous amount of psychological imbalances in certain young and vulnerable children. In fact, some researchers contend that anti-social behaviour, sexual deviance and religious fanaticism, as observed in a significant minority of children and youth today, may have been fuelled by their continuous exposure to inappropriate content, unmonitored chat rooms and violent/ hate-inciting games (Louge, 2006; Funk *et al.*, 2004). Furthermore, a study in the US on 'Children's Exposure to Negative Internet Content: Effects of Family Context', published by the Journal of Broadcasting and Electronic Media (2005), highlights that one of the dangers of sexually explicit material could be the encouragement of children to engage in anti-social and aggressive sexual behaviours. Moreover, another report, published in 2007 by the DCSF in the UK, raised similar concerns and went on to argue that in some cases this could lead to an increase in the mistreatment of women and girls. In addition, the Internet is being used by some racist and bigoted organisations to deepen ethnic and religious divides in multi-cultural communities, promoting hatred and discrimination, along with violence as a means of protecting one's identity in ethnic and religious groups. This is argued to have had a tremendous negative psychological effect on a small percentage of digital citizens. However, the consequences of this factor leaves them feeling alienated and confused, thus encouraging their search for a 'new identity' and a 'sense of belonging'. This phenomenon is now becoming a global challenge due to the borderless nature of the Internet. Nonetheless, to keep this debate in context, it must be again emphasised that all of the above-mentioned challenges are impacting a minority of children that live in the digital society.

D. Moral, Ethical and Religious Challenges

The challenges faced by vulnerable children and youth can also be of a cultural, moral, religious or ethical nature, to name but a few forms. Cultural and moral issues are arising around the world through the increased use of

social networking sites, information sharing and content creation by users themselves. The use of the Internet and ICTs are also affecting the religious and moral arena in the form of hate speech, misinterpretation of religion and brainwashing to instil extremist views in young minds, along with the promotion of racist, bigoted or fascistic behaviours. Figure 1 indicates the intersection and possible multiplier effect of these themes, which can produce a highly disturbed, volatile and unstable child that if not identified and managed could be a threat to him/her and society.

Figure 1: Complex Challenges from the Cyber World
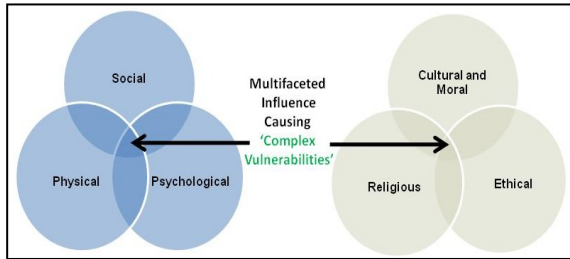
The extent of pornography and paedophilia in cyberspace and the consequences of getting trapped in these dangerous 'nets' also raises ethical and moral concerns for young innocent children and youth. Besides, there has been a growing realisation in Western societies that the violent pornography that some young men are exposed to on the Internet is eroding their respect for the dignity of women, along with giving them a distorted view of what is acceptable and normal in society. The Byron Review (2008) indicated that there is mounting concern about these changes in some societies. Aitkenhead (2010:55) states that, "the average child sees their first porn by the age of just 11. Between 60 and 90 per cent of under-16s have viewed hardcore online pornography, and the single largest group of internet porn consumers is reported to be children aged 12 to 17". Furthermore, in the article by Aitkenhead (2010: 56) a psychotherapist at the Portman Clinic, John Woods, argues that, "porn is even more addictive than alchohol and drugs". In the UK, there has been a recent increase in violence against young girls in schools observed by their teachers, parents and social workers (Hunt, 2009; Barter *et al.,* 2009). This is beginning to broaden the debate on possible influences, and further research is being conducted into the causes of this changing behaviour. Furthermore, a recent NSPCC report (Barter *et al.,* 2009:5) highlights that, "One in three girls and 16 per cent of boys reported some form of sexual partner violence". The report further states that, "Seventy per cent of girls and 13 per cent of boys stated that the sexual violence had negatively impacted on their welfare". Moreover, feminists have been arguing that the media and Internet have been promoting the sexual exploitation of women through subtle media campaigns and other forms of entertainment for decades (Jensen, 2006; Menon, 2006). Most recently, with the growing use of the Mobile phone, it has become easier to share inappropriate images and pornographic material depicting violence, abuse and the inappropriate

'sexualisation' of women and children, which is also being directly uploaded onto social networking and other websites (Calvert, 2009; Aitkenhead, 2010). Furthermore, Henes (2011) states in an article on 'Internet Porn in Ruining your Relationship', in NY Daily News, that children as young as 12 do 'sexting' in schools. Similarly, Robinson (2011) states that, "evidence that children are using mobile phones to take and pass on indecent images of themselves and others has been building for some time. Two major surveys involving more than 3,000 children suggest that four out of ten have received or seen an indecent image via a mobile". This further increases exposure to the young, as such material is presented as being normal and acceptable behaviour towards women, resulting in misguided perceptions of appropriate behaviour. This phenomenon has also been recently observed in the UK and is now exposing the young school children to blackmail and other pressures from their boyfriends (Robinson, 2011). To further support this Robinson (2011) refers to a survey of more than a thousand children of 12 to 16 years of age, by Internet Safety Expert, Ken Corrish and states that, "40 per cent saw nothing inappropriate about a topless image, while 15 per cent saw nothing inappropriate in a naked one". This demonstrates a 'numbness' that is developing in the minds of the young.

II. THE INTERSECTION – TIPPING POINT

It is important to note that we are living in a complex digital world that is transforming and influencing innocent young digital citizens. The *e-child* and the digital youth now have to deal with environments that stimulate all of their senses, which could simultaneously expose them to a multitude of inter-related threats across multiple dimensions.

The far-reaching, long-term impact of these changes on children's behaviour and psychology are still unfolding, but one thing is for sure –there is an impact. The complexity of this situation could make certain children highly vulnerable and unstable. Thus, there is a potential for the digital youth to be a risk to both themselves and society.

Figure 2: Key themes for Challenges and Vulnerabilities
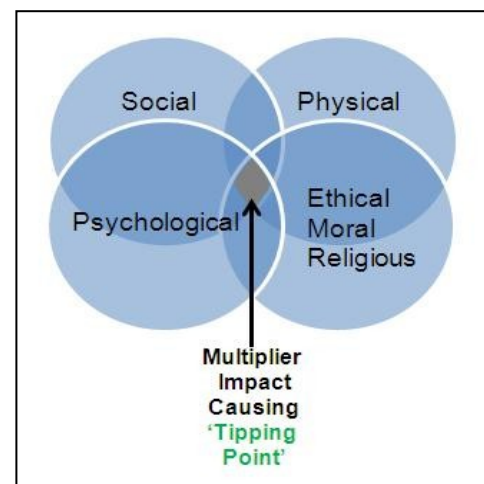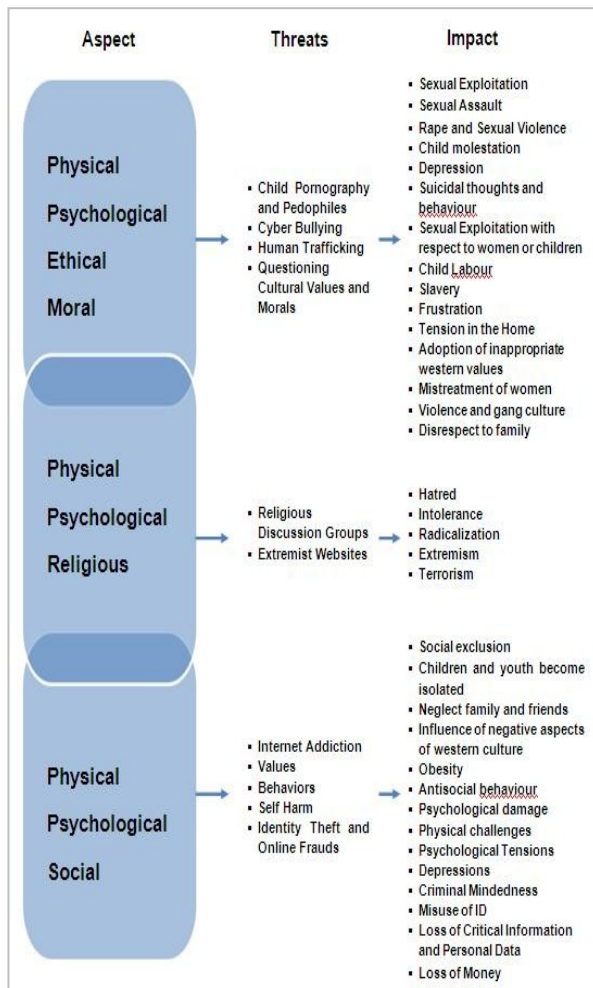

Source: Author

This presents a critical tipping point that needs to be understood and addressed very carefully in harmony with the ever changing digital society. Furthermore, it is imperative that multiple scenarios need to be planed for with interlocked, integrated and aligned 'living strategies' to protect, prevent, detect and anticipate the ever changing threats from cyberspace.

III.   SYNTHESIS AND CONSEQUENCES

The complexity of defining acceptable morals and values is a never ending debate because they vary across communities, societies and cultures. Thus the appropriate local context of each society against its task needs to be analysed and understood, and strategies and plans need to be designed to address each of the potential threats as these exist in local cultural and social contexts, for it is critical to recognise that there is huge variation in the degree to which such threats impact children.

The strategic analysis and synthesis of the challenges and threats are displayed in Figure 3 which reflects a possible example of the complex framework of inter-linked aspects, along with the possible threats and subsequent impact that the young, vulnerable digital citizens could experience.

Figure 3: Multiple Threats and their Consequences

Source: Author

IV.   CONCLUSION

The multi-dimensional challenges faced by the young digital citizens are continuously evolving, thus causing a great threat for themselves, their parents, communities, society and government at large. There is a critical need to continuously assess and understand the use and experiences of children from the internet, along with the influences of subtle changes in the digital world that has changed existing social structures, bringing far greater challenges than those that were anticipated. The risk and danger impacts developing economies which may currently lack the complete framework and structure to be able to assess, manage and address the emerging issues in their social and cultural context.

There is a great need to share best practices for cyber security policy formulation to ensure effective policies are in place that holistically address not only the aspects of cyber space but also the delicate implications and consequences to the lives of digital citizens. We have recently embarked on a transnational collaborative initiative to develop a holistic cyber security policy framework. The objective of this is to become a comprehensive toolkit for, developed, developing, and least developed countries to assist with the development of holistic integrated policies that will be integrated into the cyber security policy framework. More importantly, one of the critical disconnects today at a policy level is that, the focus on the digital security has been mainly examining issues from a security context, this leads to the lack of understanding and ability to inform and act in a holistic manner in society to engage critical ministries such as; education, health and social services from the onset. This causes deficiencies in the overall 'thinking' and the strategic development within nations.

Therefore, to enforce effective cyber security, there is a critical need to develop integrated and inter-locked policies. These policies need to be developed through a consultative and collaborative process across; public sector, private sector and civil society, bringing together expertise from health sector, education sector, technology, law enforcement agencies and other relevant organisations and institutions. Furthermore, the young digital citizens who are the greatest users of ICTs need to be directly involved in developing cyber security solutions.

V.   REFERENCES

[1] Abbasi, S., Hussain, A. (2010) Sensitization to the Challenges for Children in the Digital Society, e Worldwide Group and Cybersecurity Malaysia.
[2] Aitkenhead, D. (2010) 'Teenage Kicks: Are they hooked on porn?' *Psychologies* Magazine (6/8/2010, Available at: www.psychologies.com).
[3] Barter, C., McCarry, M., Berridge, D., Evans, K. (2009) Partner exploitation and violence in teenage intimate relationships, NSPCC (www.nspcc.org.uk/inform)
[4] Buckingham, D., Whiteman, N., Willett, R., Burn, A. (2007) The Impact of the Media on Children and Young People with a particular focus on

computer games and the internet, Prepared for the Byron Review on Children and New Technology, Department for Children, Schools and Families, UK.

[5] Byron, T. (2008) Safer Children in a Digital World, The Report of the Byron Review, Department for Children, Schools and Families, and the Department for Culture, Media and Sport, UK.

[6] Byron, T. (2010) Do we have safer children in a digital world? A review of progress since the 2008 Byron Review, Department for Children, Schools and Families, UK.

[7] Calvert, C. (2009) Sex, Cell phones, Privacy, and the First Amendment: When children become child pornographers and the Lolita effect undermines the law (Available at: firstamendment.jou.ufl.edu/pubs/SexCellPhonesPrivacyArticle.pdf)

[8] Cruz, V. A., Hisa, Q. Z. T., Imson, M. G., Mang-Usan, D. A. (2009) Obesity in school-aged children: prevalence and causes, *E-International Scientific Research Journal Consortium,* 1(4), 2009.

[9] Funk, J.B., Baldacci, H. B., Pasold, T., Baumgardner, J. (2004) Violence exposure in real-life, video games, television, movies, and the internet: is there desensitization?, Journal of Adolescence 27 (2004) 23–39.

[10] Henes, R. (2011) 'Internet porn is ruining your relationship; XXX marks the rot', New York Daily News, January 2, 2011 (Available at: http://articles.nydailynews.com/2011-01-02/news/27086059_1_pornography-internet-neil-malamuth).

[11] Hunt, L (2009) NSPCC: Third of girls face sexual coercion in relationships, Bristol University study uncovers extent of sexual violence against girls by partners, Community Care (1st September, 2009, Available at: http://www.communitycare.co.uk/Articles/2009/09/01/112473/nspcc-third-of-girls-face-sexual-coercion-in-relationships.htm).

[12] Jensen, H. (2006) Women, Media and ICTs in UN Politics: progress or backlash? *Gender in the Information Society Emerging issues, UNDP- Asia-Pacific Development Information* Programme *(APDIP),* 3-14.

[13] John, C. H. (2005) Children's exposure to negative Internet content: effects of family context, *Broadcasting and Electronic Media.*

[14] Menon, N. (2006) Reflections on the Seminar – II, *Gender in the Information Society Emerging issues, UNDP- Asia-Pacific Development Information* Programme *(APDIP),* 130-136.

[15] National Sleep Foundation (NSF) (2004) New poll finds children have poor sleep habits, USA. Available at: www.sleepfoundation.org/site/apps/nl/content2.asp~

[16] Robinson, W. (2011) The worrying spread of 'sexting': How naive schoolgirls text naked pictures of themselves to boys... who post them on the internet, Mail Online, Associated Newspapers Ltd. (26th March, 2011, Available at: http://www.dailymail.co.uk/femail/article-1370081/Most-adults-blissfully-unaware-spread-sexting--naive-schoolgirls-texting-naked-pictures-boys-But-mother-discovered-worryingly-common.html?printingPage=true).

[17] Soltani, M. (2010) Evaluation of Destructive and Negative Effects of using Computers, the Internet and Computer Games on Students, *International Journal of Computer and Network Security,* 2 (9), September 2010, Azerbaijan.

[18] Valentine, G., Holloway, S., Bingham, N. (2002) The digital generation? : Children, ICT and Everyday Nature of social exclusion, Editorial Board of Antipode, Blackwell Publishers, USA.