

## **A qualitative case study on handling electronic media-exposed kindergarten children: Challenges and strategies**

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### **Abstract**

According to thestaronline.com on 10th August 2016, there seems to be a growing concern on the extensive usage of electronic media by young children in Malaysia. The purpose of this research was to analyze the methods adopted by schools in introducing intervention measures to these children. A qualitative case study approach was adapted for this research, with 3 participants, sampled through purposeful sampling. A triangulation method was adopted where data was collected through semi structure interviews, various levels of observations and examination of existing datas to generate qualitative themes. The themes found from this research were *children's executive function, role and responsibilities of the school, role and responsibilities of other stakeholders and the cause and effects of the interventions*. The study found that awareness needs to be created among young parents on the tolerable level of gadget exposure. Wider dissemination of knowledge and information about the proper use of the electronic devices shall be another effort that need to be given attention. Diagnosing the cause early could also help children in getting early interventions by the school and parents while getting the necessary medical treatment.

**Keywords:** Personality development, Education program, Electronic Media, Children

### **INTRODUCTION**

Children's media and electronics consumption has increased rapidly within recent years. Due to this reason, there are a lot of research focusing on the effects of media and electronics usage on children's psychosocial behaviour and their relationship to media consumption. There has also been multiple views on whether the usage of electronics is highly correlated to children's psychosocial factors (Heim, Brandtzæg, Kaare, Endestad & Torgersen, 2007). Research by Barnett, Hinkley, Okely, Hesketh and Salmon (2012) found that there is a relationship between children's electronic game usage to object control, when using games that require movements. Interactive games were also found to improve children's fundamental movement skills competency (Papastergiou, 2009). This is an interesting finding as electronic gadgets has been contributed to be seen as dangerous and has been linked with negative effects on children (Heim et al., 2007).

### **PROBLEM STATEMENTS**

The report by the Perak Clinical Research Centre stated that the volume of six hours gazing at the screens every day by children with an average age of two years old is extremely worrying. This practice leads to the rising of the number of children presenting with speech delay locally. Children nowadays spend more than seven hours daily using electronic gadgets and the information and communication technologies

(ICTs) in their lives either in their learning process, communicating, or playing games (Saruji, Hassan & Drus, 2017). The usage of gadgets is increasing rapidly in Malaysia with different types of gadgets being exposed to children especially in educating and comforting the children. This practice may contribute to the escalating childhood development problems in Malaysia. William's (2011) article highlighted that as the usage of electronics increased, the less books or newspapers the millennials read, although they are not up to date or uninformed. They are informed, but in a different way. This generation is also found to be more distracted. Recent study has found that student's test scores in the United States have dropped significantly in the last decade, which could be contributed to the usage of electronic media (<http://www.nationalmathandscience.org>).

The children are observed to be spending different amount of time interacting with electronic gadgets like smart phones, radio, television, tablet games, Xbox, iPod, and stereo system (Fazree&Zakaria, 2018). This could contribute to children being addicted to the gadget use. The detrimental effects arising from the extensive exposure of electronic media among young children are already known through various studies done by earlier researchers. Nevertheless, despite the intensifying attention to the issue, Saruji et. al (2017) claimed that there are very limited papers found on the impact of using ICTs and electronic gadgets among young children aged from four to twelve years old in Malaysia. This will result in the issue not being attended at the very initial instant of early childhood setting which subsequently makes the matter worse. It is therefore not known how this issue disrupts the Malaysian education setting at the kindergarten level which is supposed to be the significant foundation during the learning years of the children.

## **OBJECTIVE**

The objective of this research is to:

- i. To examine the signs shown by kindergarten children who are exposed to the use of electronic media;
- ii. To explore the ways children experiencing learning in school
- iii. To analyze the methods adopted by the school in introducing intervention measures to these children.

## **LITERATURE REVIEW**

Radesky (2018) claimed that the paediatricians have been interested in children's relationships with digital media since the early research on television and child behaviour emerged in the 1970s. However, it is now that TV, video games, and electronic media have pervaded every aspect of the children's environment be it their home, their relationships, their schools and community, and their culture. It is now common to see young children to be more attached to the electronic media rather than engaging themselves with the conventional type of children activities. Since the pace of adoption of electronic media and technology is increasing, she claims that parents and educators are now nervous about what role the growing media landscape will be playing in children's lives, health, and learning. The society is at the state of serious concern over their roles to ensure that they are *controlling* the technology in ways that meet human values, rather than allowing it to control them.

The findings by Newman (2018) indicates that brain development which is the foundation of all abilities including cognitive, physical, social-emotional, speech and language and regulation of all these elements relies on early relationships. He further claims that with the increase in media use by children and parents, these critical relationships may be compromised with potential long-term negative consequences. He emphasizes that only putting relationship first and foremost will the children develop healthy minds, successful social skills, and regulated bodies.

In contrary, Slutsky, Slutsky & DeShleter (2014) indicated that research on the subject of technology is quite a mixed, showing both negative and positive results. According to them, not all technology is negative whilst at the same time it can provide enriching experiences through interactive books and mathematical games that can be uploaded to electronic devices for free or at minimal payment. The right content of the technological devices may result in the children gaining ample benefits from the use. However, they also argued that the biggest issue is on how much time should be allowed to the children to spend on these devices even if they are educational in nature as many studies shown that screen time takes away the children from their social playtime. Play as they emphasized, is the most important and fundamental experience that children can have. Perhaps, the greatest challenge for the adults nowadays is that many children opting to play with the technological devices rather than engaging in the traditional forms of play.

American Academic of Paediatrics (2013) reported that young children who look at the screens for more than two hours per day are six times more likely to develop a language delay. It is informed that there are growing concerns by the medical professionals with the increasing number of children presenting with speech delay over the recent years. Many studies have found that the excessive screen time impairs child-parent interactions, linked to the obesity through inactive lifestyle, prompts to screen addiction, and affects sleep and emotional wellbeing and learning too.

Similarly, Radesky, (2018) also suggests that heavy media use in early childhood has been linked to language and cognitive delays, problems in maintain attention and thinking about other peoples' thoughts and feelings, school readiness problems, and more aggressive behaviour when the media content is violent. Limtrakul, Louthrenoo, Narkpongphun, Boonchooduang and Chonchaiya (2017) further supported that the increased media use time was significantly associated with the decreased in pro- psychosocial behaviour scores in children. The excessive use of electronic media is claimed to be leading to negative physical and psychosocial health effects of the young children.

Moreover, Allen (2019) from the Daily Mail asserts that children as young as six years old are losing hours of sleep after using electronic gadgets before bedtime. Children who experience this get 20 minutes less sleep a night on average than those who avoid electronic devices. This can be a consequence to the devices producing blue light which is believed to disrupt important signals that tell the body it is dark and time to go to sleep, and at the same time to suppress the sleep hormone. He further claims that young children who are sleep deprived perform worse in school and struggle to concentrate in class. Another study done by Moawad (2017) on the effect of tablet-based electronic games on the child's self-concept, suggests that children who were in the control group showed improvement in their curiosity behaviour. It is found that these children spent more time playing with their siblings and engaging in different activities and non-electronic play and games, as well as watching TV. Such activities are associated with the children's physical growth, biological maturation, and behavioural development that help the children to build curiosity and explore the environments.

Similar occurrence is taking place in the context of Malaysia whereby the use of gadgets is overflowing specifically with the intention to either educate or to comfort the children (Fazree & Zakaria, 2018). They further mentioned that the addiction to gadget use will affect the children's health as well as their cognitive and social development. They proposed that rigorous use of gadget will deteriorate language development, reading skill, memory, and concentration. Uncontrolled use will impair the family and social relationship as well as leading to both physical and mental illness. Likewise, Aziz (2018) is in the agreement that one of the challenges the Malaysian education system is facing now is the generation addicted to smartphones or other mobile devices which leads to the inability to focus and engage in the actual tasks at hand. Along with the Internet and its infinite distractions, there are a lot more products and platforms competing for attention today than there were 30 years ago. Hence, it is not easy for the distracted students to give focus on lessons and this will grow more difficult for teachers to get their attention during lessons.

## **METHODOLOGY**

A qualitative research, utilizing the case study approach would be adapted to this research investigating the school experience of handling children being exposed to electronic media. It is because the issue of school experiences needs to be explored further and thus, an understanding of the contexts in which participants in the study address that problem is warranted (Creswell & Poth, 2018).

This research would use a triangulation method for data collection where the researcher explores multiple sources of data including an interview session, two observation sessions and existing documents reviews. Using triangulation is highly effective as the researcher is able to achieve confirmability this way, and also see the data from multiple different angles (Kamarudin, 2016; Creswell, 2012). This option of qualitative research design also helps the researcher to analyze the data through description of the issue and themes of the issue.

The respondent who is an operator of an established kindergarten centre was sampled using purposeful sampling. The respondent was interviewed using a semi-structured interview method. The individual face-to-face semi structure interview session took around 30 minutes. The interview was guided by an interview protocol with thirteen interview questions being outlined and other sub-questions probed along the way. The interview was audio-taped using two different audio recorders and transcribed verbatim. Since the interview was originally done in Bahasa Malaysia, the verbatim transcription was translated into English Language for analysis. The interview was analysed in detail through the steps of coding process from the initial organization of data up to the generation of the emergent themes. In addition to that, the interview is supported with two sessions of the non-participant observations during the process of teaching-and-learning of two separate lessons of English Language and the Art and Craft respectively. The researcher is sited at the back of the classroom setting while watching and taking field notes of what being observed from a distance. To ensure the trustworthiness of the data, two separate columns were outlined in the filed notes to differentiate the descriptive and reflective perspectives of the researcher. The other data source is the review of the documents on work done by the children during the lessons. It is taken as evidence that exhibit the varying level of acquisition of the fine psychomotor skills among the observed children. All the findings from all the three sources of interview, observation and document review matched with each other. As for the interview, the respondent was asked with in-depth questions and she has been repeating the same points irrespective of the different questions asked.

## **RESULT**

Using qualitative thematic analysis, the interview transcription and observation were coded for emergent themes. For the analysis, there were four emergent themes that arose from the data analysis. The themes identified from the data are *children's executive function, role and responsibilities of the school, role and responsibilities of other stakeholders* and *the cause and effects of the interventions*. The themes are arranged in an order based on environmental systems of The Ecological Theory by Bronfenbrenner (1917 – 2005). As it looks into the system in which children live and the surrounding people who influence their development, the theory further demonstrates how the different contexts of children's lives are being interconnected. As such the discussion of the findings zooms out from the microsystem level to the bigger chronosystem level of the children environment.

### ***Children's Executive Function***

The respondent stressed that there is an increase in the percentage of children experiencing learning difficulties every year. The overall development of children is worsening over time since the overflowing of electronic gadgets in the life style of the society. She highlighted that it is obvious that children of today have slower pick up in learning which results in the process becomes slower. The children tend to

have difficulty in understanding instructions given by the teachers. She further added that these children displayed a lack in the fine psychomotor skills which affects the skills development in them. They showed less interest and passion towards activities involving hand movements including writing. The children could hardly move their fingers and indicating that they have problem in writing. In addition to those learning performance demonstrated by the children, another evident of the adverse effect of gadgets in the rise in speech delay among the kindergarten children.

Over the recent years, receiving children with speech problem is no more a surprise. It is apparent that the children is facing communication problem with diminishing eye contact and inability to develop human relationships. Even to manage themselves is a problem whereby the children are not able to walk and run with balance. With the feeble-looking and poor body posture, the children need to be taught on the basic movements of walking, running, sliding and jumping to overcome the problem of weak psychomotor. Besides the cognitive aspect, children who are exposed to excessive use of electronic media normally display disruptive and violent behaviours when the gadgets are denied from them. Be it at home or at school, these kids will not only throw tantrum but will also be throwing things around them. The outburst and aggressiveness in behaviour demonstrated by those children is associated with the addiction towards gadgets. Sleepiness, passiveness and lack of response add to the list of negative psychosocial behaviours attached to them.

### ***Role and Responsibilities of the School***

The respondent stated that her school implements a holistic education of teaching-and-learning which also include the aspects of movement, gross psychomotor and fine psychomotor developments. The school only uses electronic media for playing music, showing videos and musical movements. This minimal introduction of media use is in support of the preference by the teachers to be adopting the conventional style of teaching. The school seems to be in a disappointment with the parents who do not control the exposure of gadgets to their children. She claimed that good curriculum is now being compromised by the uncontrolled exposure to electronic devices. This problem gives implication to the teachers to work extra in educating the children. Vast experience in handling the complexity of today's children has become an important factor to the teachers. As such, she urged for continuous trainings and knowledge upgrading to be crucial for both the teachers and the school operators.

As a result of the deteriorating performance of the children at the point of entering kindergarten, the school currently opens up its new enrolment to children of 4 and 5 year olds only, while no new intake is opened to children aged 6. The enrolment of 4 and 5 year olds is opened to all children of any condition with no pre-assessment done upon entry. These new comers will solely be undergoing the learning programme at this school with continuous observations carried out throughout their schooling years. The school is also planning to open up to 3 year olds soon as a measure for early intervention. Moreover, among other corrective measures undertaken by the school is to organize annual orientation day prior to school opening. This initiative is meant for delivering briefing, providing explanation and offering advices to parents among which touches on the issues of adverse repercussions that the gadgets offer to children development and the need for parents to be firm in controlling the use of gadgets at home. Occasional discussion sessions are also held with the parents to persistently advise parents on the necessity to encourage a lot of talking with the children at home in preventing them from attaching themselves with the gadgets.

In recent years, the school also took extra steps in making compulsory the swimming lessons conducted by qualified instructor besides establishing a play gym at their kindergarten. These two initiatives are meant for helping the children in body balancing which has been affected by their weak body posture due to overuse of electronic media. Insightful advice and treatment options are offered to the parents of children showing special need symptoms. The school also makes clear of their rules and regulations to parents emphasizing on the requirement to restrict the exposure of their children towards the gadgets at home. In addition to that, the school is no longer taking in new comers of 6 years old since the situation of gadget addiction worsen over years. Prior to three years ago, the school conducted entry

evaluation among the new comers of 6 year old on the skill acquisition of writing, identifying alphabets and numbers. Since they do not consider any new intake for 6 year olds, the school now imposes strict regulation on the continuation of education at their centre upon reaching the age of 6 years. Parents who have been non-cooperative in taking corrective measures towards their children are urged to move to another school.

As part of the efforts of tracking the progress of the children after receiving interventions introduced by the school, student assessment records are made available based on the standard outlined by the Malaysian Ministry of Education. However, the school values-adds the scope of assessment to include the swimming skills as well. The record will be updated depending as and when the needs arise and marked by the teachers from time to time. The school also organizes periodical open days for parents to review their children's progress at school.

### ***Role and Responsibilities of Other Stakeholders***

Everyone has to play their role in curbing the situation. Parents are the closest people to the children before the school and teachers come in. Nevertheless, the respondent mentioned that parents nowadays do not know the rules and responsibilities of parenting. The misconception on the use of electronic media results in parents presuming that gadgets can be a controlling mechanism for behaviour of their children. This lack of consciousness leads to them taking short cuts in managing their children from misbehaving by giving them the electronic gadgets.

These parents tend to introduce various gadgets to the children to replace their contributing roles of talking, stimulating and handling children throughout their growing years whilst parents are observed to be occupying themselves with gadgets too. Hand phones, smart devices, tablets and iPads are observed to be the most common electronic devices given to young children by the parents. There is an urged need for the parents to be reminded of their roles towards the children and hence should execute them by not allowing the children to conquer them unnecessarily. The respondent further added that parents are normally in the state of denial upon receiving the advice from the school with regards to the performance of their children. Socio-economic status does not correlate with the acceptability level of the parents towards the news. Learned parents are observed to be not necessarily practicing what they know and therefore can be very uncooperative too. These kind of parents tend to underrate the kindergarten operators and teachers by being reluctant to accept their advices.

In contrary, she believes that it shall be a joint work between the parents and the school in making sure that all intervention plans are well carried out. Experienced teachers can help to identify problematic children at the initial stage of entering the school. She also emphasized that occupational therapists play an important role as the consultant advising the school in the setting up process of the play gym. All the equipment required for promoting the development of the children is selected by referring to the standard set by the therapists. In addition to that, once the problematic children have been identified by the school, further medical diagnosis can only be done by the experts in the medical field. Hence, these children will be advised to seek immediate medical attention with the hospitals. Reference also be made by the school to Association of Dyslexia for further test to be done on children showing signs of dyslexia.

### ***The Cause and Effects of the Interventions***

It has been the general expectation of the public that children nowadays are to be more intelligent due to better food supplement provided since pregnancies. Nevertheless, from the respondent's observations throughout her 20 years of career in the field of early childhood education, it has been her belief that there is an obvious undesirable difference among children of today than the ones in 10 years ago. It has been a worrying problem within today's society on the excessive exposure towards gadgets which has tremendously affecting children's performance in school. The respondent mentioned that special need children can either be gadget related factor or biological factor since born. However, she justified that exposure to gadgets further impedes the development of children's fine psychomotor skills as a

consequence of the lack in the practical use of the hand muscles. The use of electronic gadgets only allow the children to learn through observation and screen touching. There is also possible effects of gadget radiation to the brain development in young children. Excessive exposure to gadgets may also cause malnutrition and poor body posture in children. Thus, kids playing time is believed to very important to children development. There comes the importance of a play gym towards the development of gross psychomotor. In spite of that, skills of writing, tearing, cutting, crumpling and moulding are important to the children too. She advocated that it is the rights of the children to receive proper treatment and education throughout their growing years. It is undeniable that educating young children can sometimes be messy, but it is a process that takes time and requires patience.

As such, parental support is important for the favourable outcome of children development. If no preventive measure are taken to circumvent the situation, things will get worse as she believes that symptoms of gadget addiction has similarity to the symptoms of drug addiction. She proposed for actions to be taken as what the developed countries have been doing in controlling their people from gadget addictions although they are the ones who invented all these devices. In introducing the intervention measures to the children in need, the school faces difficulties in creating awareness among those parents. It is not a simple job to convince the parents in getting medical attention for the children. Parents tend to be more concerned on the issuance of Persons with Disabilities Card and reluctant to seek the necessary help. Even though the school has no idea on the type of electronic media exposed to the children at home, it believes that the awareness towards the acceptable percentage of gadget exposure is very lacking.

The excessive use of gadgets is very much uncontrolled nowadays. It is the common problem of the society to be observed playing gadgets everywhere and anytime around the clock. Another challenge faced by the school is the delay in getting hospital appointments for therapy sessions. Insufficient number of occupational therapists and speech therapists in hospitals causing the parents to face long delay in getting therapists' treatment for their children. Moreover, stretched gaps between the appointments affecting the parents to slow down on home-training sessions.

On the other hand, despite of the obstacles faced along the way, the school observed favourable results since organizing an orientation day at the start of each schooling year. Encouraging progress is shown by the children with cooperative parents and such improvements can be witnessed after a short period of time upon providing them with the necessary interventions. Personal experience of the teacher in dealing with special need child further helps to convince the parents in getting early intervention as this effort has proven to be very helpful to the children to the extent that a number of children are able to be in the main stream of primary education.

## **DISCUSSION**

Establishment of proper guidelines on the limits imposed on the gadget use among young children should given serious consideration. There is a need to create awareness among young parents on the tolerable level of gadget exposure. Wider dissemination of knowledge and information about the proper use of the electronic devices shall be another effort that need to be given attention. Diagnosing the cause early is to help the children in getting early interventions by the school and parents while getting the necessary medical treatment. This proactive action is significant to support the call for immediate medical attention for children with presented symptoms. The school is suggesting for a once a week frequency for effective therapy sessions. Thus, there is a need for sufficient number of occupational therapists and speech therapists in the government hospitals and with that the government is responsible in providing an adequate number of therapists to cater for the demand. In the meantime, children also need the support from their parents at home and the teachers in school in between the therapy sessions. Parents should be encouraged to talk with the children at home as this can prevent children from playing with the electronic gadgets.

## CONCLUSION

The repercussion of extensive and uncontrolled exposure towards electronic media among young children can be at the disadvantage of the school. The weakening of learning performance and the rising in disruptive psychosocial behaviour have led to the teaching-and-learning related process to be doubled up by the school. A lot of extra work need to be carried out in making sure that the children are well treated in the effort of regaining their individual potentials at the highest possible level. The work of the school will be smoothen upon receiving the essential support from other stakeholders including the parents, community and also the authority. These are the people surrounding the children which give direct influence on their development. Without the support from the environment for effective preventive measures and intervention initiatives, nothing much can be done by the school to restrain the situation from deteriorating further.

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