

PERCEIVED USEFULNESS OF DIGITAL TECHNOLOGY ON LANGUAGE DEVELOPMENT OF CHILDREN

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Abstract

This paper examined the parents' perceived usefulness of digital technology on the language development of children. The study was a descriptive survey research design. Two research questions were raised and one corresponding hypothesis was tested for the study. The population comprised of all nursery and primary school teachers and parents in Ilorin metropolis. Convenient sampling technique was used to select 100 nursery and primary school teachers and 100 parents who responded to the questionnaire making a total of 200 sample size. The researcher developed instruments titled 'Perceived Usefulness of Digital Technology on Language Development of Children' Questionnaire (PUDTLDCQ) was used to elicit data for this study. Data collated was analyzed using percentage and independent t-test with the use of Statistical Package for Social Sciences (SPSS). The finding revealed that the perception of parents on digital technology on the language development of children was positive and that there was no significant difference in the perception of parents on the usefulness of digital technology on the language development of children based on gender. It was therefore recommended among others that parents and Schools should also make use of digital tools in teaching children most especial the ones in the kindergarten and pre-nursery classes as this will aid language development among children.

Keywords: Perception, Parents, Digital Technology, Language Development, Children

Introduction

Digital technology seems to be an amazing and important tool in many fields including education in this 21st century. Technology has become the knowledge transfer highway in most countries of the world. Involvement of people in the use of digital technology which come in different forms is not limited to particular people but it is common to everybody irrespective of their age. Different categories of people used technology for different motives and activities. It is becoming the most common and effective tool for learning and language development by children and young adults. The use of digital technology in education is an imperative aspect that has gained prominence. These theories (known as embodied and situated cognition theories) hold that knowledge is acquired by humans through rich physical and social interaction with their environment (Barsalou, 2008).

Digital technology is being utilized not only in higher education but at all levels of education, from nursery to the university level. In most nursery schools' digital technology tools are used to teach pupils how to read letters and numbers which is very important in forming language. In nursery schools, pupils feel interested and develop curiosity when they observe technology. At this level, students are shown various pictures or movies on the internet; they are taught how to draw objects and colours. As the

children get enrolled in formal schooling, they learn how to make use of the internet to improve their knowledge and development of languages. Gradually children learn to enhance skills and abilities of how to make use of digital technology and as they grow, they make use of it to implement all their tasks and operations adequately. Technology can be made use of by the children in groups and pairs and this is considered as more effective than single usage (Higgins, Xiao, & Katsipataki, 2012).

Digital technology's integration into the daily lives of children and its influence on their cognitive, emotional, and language development continues to increase day by day with new inventions of digital tools. Technology offers many opportunities for children to play, explore, and learn (Linebarger & Piotrowski, 2009). From the forgoing it suggests generally positive views about the inclusion and strengthening of digital technologies in developments of children, saying that digital technology is necessary and essential learning tools for language development. The widespread use of digital technologies is in the form of computers, laptops, tablets, smartphones, mobile phones and so forth. The main purpose of digital technologies is to form a connection between the children rapidly, effortlessly and cost-effectively. The children get connected with a huge range of digital services and resources. There are several benefits of learning with digital technologies, on the other hand, they are accompanied by some challenges as well as risks for the learners. It can, therefore, be said that digital technology will help children learn fast and at the same time can be very dangerous for children if addicted to it. These digital technological tools are not just being used for playing alone but are also used for learning of which language development is not an exception.

Language development is the process by which children come to understand and communicate language during early childhood. From birth up to the age of five, children develop language at a very rapid pace. The stages of language development are universal among humans. Likewise, the age and the pace at which a child reaches each milestone of language development vary greatly among children. More than any other aspect of development, language development reflects the growth and maturation of the brain. Thus, all babies are born with the ability and capability to learn the language. Ogunlade (1995) identified five elements of language development, according to him imitation is one of the ways the children learn the language of the mother, by imitating the mother and the immediate environment. The immediate environment could be the digital technology that the children watch and listen to help in their language development. Dialogue, storytelling, questioning and play are some of the elements of language development identified to help children in their language development. Social interaction determines which language they eventually learn. It is noteworthy that in many homes and schools children are exposed to different digital technology equipment such as computer, television, smartphones, iPad, digital toy and video games. Most parents used this to keep the children away from them and not to disturb them. This is also found in most schools these days.

Children are allowed access to this equipment whether consciously or unconsciously by their parents and caregivers. In some homes, children grow up in digital technology-rich homes. They are daily in contact with a wide range of digital tools however this rich-digital technology context does not lead automatically to high use from the children. Digital technologies are important (but not dominant) part of children's lives. Even though children loved playing digital games or watching videos, they also enjoy performing other non-digital activities. Digital technology use is balanced with many other activities, including outdoor play and non-digital toys. Children are digital natives, but only to some extent. Most children acquire easily and quickly basic operational skills. Some have acquired also more advanced online competencies. Few use digital technologies not only as passive users but also in a creative way. Yet, they also encounter situations that they do not manage, for which they have to ask for help. Their capabilities are limited by their state of cognitive development. Reading and writing skills influence the quality of children's digital interactions. Since children's brains are extremely flexible in this period, these learning opportunities constitute a critical developmental point in children and through the natural exploration and

discovery of their world, new connections between neurons are formed and existing connections are strengthened (Blanchard & Moore, 2010).

It has also been reported that in the United States, more than 1,000 parents reported on a nationwide telephone interview that their children under the age of 6 used digital technology an average of 1.58 hours a day, played outside an average of 2.01 hours, and spent 39 minutes reading. In the study, it was found that 36% of the children lived in a house where the television was constantly on, 45% of the parents used television as a means to keep their children occupied when they had important jobs to complete, and 27% of the children between 4 and 6 used a computer every day (Rideout, Vandewater, & Wartella, 2003).

On the contrary, the use of digital technology has been associated with lack of attention, aggressive behaviours, and physical inactivity, obesity, and sleep problems in preschool and school-age children. The overuse of digital technology causes children to use their time inefficiently. Concern should also be paid to the cognitive and emotional effects that these technologies will have on the language development and the general development of children (Brown, 2011). The overuse of technology in early childhood is related to cognitive, language, and social/emotional delays in community-based researches (Pagani, Fitzpatrick, Barnett, & Dubow, 2010).

Statement of the Problem

Parents, teachers and caregivers may have different perceptions on the use of digital technology for the language development of children. It is a known fact that children have access to digital technology tools such as television, computer, smartphones, iPad, digital toy and video games everywhere they turn to. Digital technology is fast taking over our means of communication and language development of children. It is becoming part of every day activities by children in our society. These digital technology tools are available to children both at home and schools and being used for language development of children. Despite the advantages of digital technology in helping children learn fast and develop language it also comes with disadvantages or challenges, such as learning vulgar languages that are not acceptable in our society. Becoming so addicted to these tools is dangerous to children health too.

Several studies have been conducted on digital technology and its influence on language development and other areas of development. For instance, Kutner and Olson (2008) conducted a study and found that there is a strong link between violence in video games and real-life violence and that these games lead to social isolation and lack of communication with children. In the same vein, Sevi, Odabaşioğlu, Genç, Soykal and Ozturk, (2014) opined that increased use of smartphones has been reported to be associated with passive-aggressive, unprotected, socially incompatibility, obsession, addiction, and anxiety. It has been reported that those children engaged with their smartphone during school negatively affect both own and their classmates' attention. On the contrary, Chonchaiya and Prusanandaonda (2008) submitted that television plays an active role in the children's world due to its visual and auditory captivating and entertaining nature. Watching an excessive amount of television and videos by children less than two years of age has been reported to significantly influence language development and behavioural disturbances. Since there are conflicting influences of the digital technology on the language development of children, it is on this premise that the researchers investigated the parent perceived usefulness of digital technology on the language development of children.

The objective of the study

1. To investigate the parents' perceived usefulness of digital technology on the language development of children.
2. To investigate the parents' perceived usefulness of digital technology on the language development of children based on gender

Research Question

1. How do parents perceive the usefulness of digital technology on language development of children?
2. How do parents perceive the usefulness of digital technology on language development of children based on gender?

Research Hypothesis

H₀₁: There is no significant difference in the parents' perceived usefulness of digital technology on language development of children based on gender.

Methodology

The study is a descriptive survey research design. Descriptive survey design enables information to be obtained from a representative sample of the population and describe the situation as they exist. It also focuses attention on the people; their beliefs opinions perception, motivation, attitude and behaviours. The survey was chosen because it enables researchers to collect required information about the level of perception of parents on language development of children in Ilorin Metropolis. The population of the study was nursery and primary school teachers and parents that were randomly selected in Ilorin Metropolis. Convenient sampling technique was used to select 200 parents who responded to the questionnaire. 100 nursery and primary school teachers and 100 parents were given the questionnaires. A researcher designed questionnaire titled "Parents' Perceived Usefulness of Digital Technology on Language Development of Children" was used to elicit information from the respondents. The instrument comprises of section A and B. Section A elicited data on the demographic variable of the respondents while section B focused on the perception of the parents on the language development. The items were rated on a modified four Likert scale of Strongly Agree (SA), Agree (A) Disagree (D) and Strongly Disagree (SD). The data collated from the administered Questionnaires were subjected to descriptive and inferential statistics. The percentage was used to answer the research question one, while the independent t-test was used to test the postulated hypothesis for this study.

Results

The study was guided by two research question and one corresponding hypothesis. Research question 1 was answered using percentage while the corresponding hypothesis was tested with the use of the independent t-test statistical tool.

Research Question One: *How do parents perceive the usefulness of digital technology on language development of children?*

To answer research question 1, responses on parents' perception of the influence of digital technology on the language development of children in Ilorin metropolis were coded and subjected to percentage analysis. The minimum obtained score from the instrument was 16, the maximum score was 60 and the range was 44. The range was divided into two categories of perception (positive and negative). Respondents with scores from 16 – 40 were regarded as having negative perception while respondents with scores from 41-64 were regarded as having a positive perception about the usefulness of the digital technology on the language development of children in Ilorin Metropolis. The result is presented in Table 1.

Table 1: Percentage Analysis on Perception of Parents on the Influence of Digital Technology on Language Development of Children in Ilorin Metropolis

Perception of Parents	Frequency	Percentage
Positive	166	83%
Negative	34	17%
Total	200	100

Results in Table 1 show the perception of parents on the influence of digital technology on the language development of children. As shown in the table, 17% of the parents had a negative perception about the usefulness of digital technology on the language development of children, while 83% of the sampled parents had a positive perception about the usefulness of digital technology on the language development of children. This means that the perception of parents on the usefulness of digital technology on language development of children was positive.

Hypothesis Testing

One research hypothesis postulated for this study, the hypothesis was tested using independent t-tested statistics at 0.05 level of significance.

H₀₁: There is no significant difference in the parents' perceived usefulness of digital technology on language development of children based on gender.

To test the research hypothesis, parents' responses on the influence of digital technology on the language development of children based on gender were coded and subjected to t-test statistics. The result of the t-test statistics is presented in Table 2

Table 2: Independent t-test Analysis on Difference in the Perception of Parents on the Influence of Digital Technology on Language Development of Children based on Gender

Gender	NO	Mean	Std	Df	t-cal	p-value	Remark
Male	112	46.11	7.92	198	0.90	0.37	Not Significant
Female	88	47.05					

Result in Table 2 showed a calculated t-value of 0.90 and p-value of 0.37 that is greater than 0.05 ($0.37 > 0.05$). Since 0.37 is greater than 0.05 level of significance, the null hypothesis was accepted. This indicated that there was no significant difference in the perception of parents on the influence of digital technology on the language development of children in Ilorin Metropolis based on gender.

Discussion of the Findings

The finding of this study revealed that the perception of parents on digital technology on the language development of children in Ilorin metropolis was positive. This result is possible where the children are allowed to watch or make use of digital devices such as television, radio, iPad and phones. It should also be noted that most schools use these digital technology tools in schools nowadays. This finding is in agreement with that of Hatzigianni and Margetts (2014) whose report revealed that parents have positive attitudes toward digital technology use in early childhood. And further revealed that parents generally believe that digital technology improves and increases their children's technological awareness and has a positive impact on their educational development. The Entertainment Software Association (2013) reported that 63% of parents believe video games are a positive part of their children's lives. That same study reported that 80% of "German parents" play video games with their children and 66% of those

parents say games have brought their families closer together. On the contrary, the results from the study of Zimmerman and Christakis (2007) reported a negative correlation between DVD viewing and vocabulary development.

Furthermore, the finding of the study revealed that there was no significant difference in the perception of parents on the usefulness of digital technology on language development of children in Ilorin Metropolis based on gender. The plausible explanation for this is that the parents and teachers allow their children to interact with digital technology tools irrespective of their genders. Interestingly, children exposed to no digital technology use had lower levels of language development compared to children with exposure to a digital technology device. This is observed among children in their interaction with peers at school and home when they are chorusing what they have watched.

Conclusion

It was concluded based on the findings of this study that digital technology positively influenced language development of children in Ilorin Metropolis as perceived by the parents and that perception of parents on the digital technology on the language development of children based on gender has no significant difference.

Recommendations

Based on the findings of the study, it was, therefore, recommended that the parents and teachers should ensure that children are allowed access to digital technology devices but should be given close monitoring so that it would not be used in a wrong way and influence the children negatively. Schools should also make use of digital tools in teaching children most especial the ones in the kindergarten and pre-nursery class as this will aid language development among children.

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Samuel, J. G.; Ojuawo, A. A.; Gbadamosi, S. T. & Olaoye, O. T.

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