

Relationship between Parental Perception and Young Childrens' Usage of Computers

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KEYWORDS Technology Use. Jammu and Kashmir. Parenting. Information Technology. Preschool Children

ABSTRACT The present research was conducted to study the relationship between parental perception and young children's usage of computers. The sample for the study comprised of 100 preschool children in the age group 3-6 years and their parents. The tools used for collecting information were self devised Questionnaire and Interview Schedule. Results of the study revealed that on an average, the sample children spent less than 5 hours per week on the computers and most of that time was utilized for recreational activities. Majority of the parents responded that computer helped their children in exploring new technology. Childrens' knowledge about colours, shapes, letters also developed by using computers. However, large number of parents also expressed concern that eyesight of their children got affected by using computers. Parental perception about computers was found to be independent of parental occupation and education. However, duration of computer used by children varied according to parental perception since parents having more positive perception about computers allowed their children to use computer more frequently. The study points to a need for strengthening positive parental perception about used of computers for children's learning.

INTRODUCTION

In the 21st century, both television and computers have been important influences in children's lives (Calvert 1999). People vary in their perception about the new technological innovations. For some, the computer is a positive tool with the power to transform and revolutionize children's learning. For others, the computer is a menacing force, more likely to undermine than to improve children's education. Some experts view the computer as an excellent medium for open ended and exploratory learning (Fishman 1999). The computer serves as an important influence in children's lives through the role it can play in experiential learning (Samaras 1996; Linn and Hsi 1999). Computer can also function in children lives as a multipurpose tool in helping them to achieve academic goals and become more creative (Bank and King 1999). Clements and Samara (2003) recommended computer technology as a tool for

improving children's learning through exploration, creative problem solving and self guided instruction.

As children use computers more and more both in schools and at home, there is renewed concern that using computers too often will hurt them both mentally and physically. The most frequently cited are visual strain, harmful effects of radiation, posture and skeletal problems (Santrock 1997). Wardle (1999) believes that computer does not need to be part of children's foundation for learning. Some researchers assert that the early years are necessary for establishing a foundation for success later in life and computers have limited value in doing so.

However, there is growing evidence that now a days computers are used in many fields and education is one of the fields within which computers are commonly used (Yelland and Olgun 2002). Children can use computers to develop and practice a broad range of skills. They use computers to learn about letters, numbers, shapes, colours and rhythm. Paul and Attewel (2003) conducted a study in which they compared young children who spent time at home on activities such as reading, sports or outside play and children who use home computers a lot for over 8 hours a week. It was found that computer users spent much less time on sports and outdoor activities than non computers users. Though

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computer use does seem to affect other activities of children, nevertheless. It has become an important educational aid and its use cannot be limited or divided. In view of this, several organizations have come up with safeguards to protect children from negative effects of computers.

NAEYC (National Association for Education of Young Children 1996) has prepared guidelines for parents and teachers for protecting young children from hazards associated with computer use. According to these guidelines, the parents have an important role to play as facilitators. They are in control of the kind of computer set up the child has, where the computer resides in the household and what kind of access the child has to the computer. Once the computer is set up and software is purchased, there is the question of how productive and beneficial a child's time on the computer will be. Bank and Graham (2000) reported that children tend to spend longer at the computers in the presence of an adult. The actual benefit of computer to the child depends primarily on the quality of parental involvement, the quality of educational software that the child is using and following the developmentally appropriate practices in the way the child uses the computers.

Though the use of computers has been widely researched and discussed globally, however very few such studies are available for Indian children and no such study has been undertaken so far in Jammu city of Jammu and Kashmir state of India. Keeping this as background, the present research work was designed to study the aspects of computer usage among young preschool children and the perception of parents related to the use of computers by the children. Further, it aimed at assessing the relationship between parental characteristics, parental perception, and usage of computers by children.

METHODOLOGY

The sample for the study comprised of 100 pre-school children in the age group 3-6 years and their parents (either mother or father). The entire sample was selected from different preschools of urban areas of Jammu city and Gandhi Nagar zone through random sampling (lottery method) technique. The major tools used for the study were self devised Questionnaire and Interview Schedule. The Questionnaire was used to elicit information from parents pertaining to

their perception about computer use by their preschool children. The major areas included in the questionnaire were: Availability of computers at home, use of computers by children, advantages and disadvantages of computer usage by children, parents' involvement and participation. Interviews were conducted with the preschoolers for gathering information regarding the source of knowledge about computers, amount of time spent by them on computer per day, games / activities performed on the computer and their parents' participation and involvement.

For data collection, permission was obtained from various schools to interview the preschool children. The purpose of the study was explained to the school authorities to obtain consent. Data collection was started with the interview schedule where individual children were interviewed. 5-6 visits were made in each school to gather the desired information. Local language was used during the interview and the researcher herself recorded the entire interview. To collect the information about parental perception, school teachers of preschool children were involved. The questionnaire was given to the teachers to obtain information from the parents. The entire data collection was completed within a period of four months. The data obtained were subjected to both quantitative and qualitative analysis. For quantitative analysis, the data was coded and organized in tables. Percentages and Chi-square (χ^2) test were used to evaluate results. In addition, content analysis of the obtained responses was undertaken.

RESULTS AND DISCUSSION

Background Information about the Respondents

Forty two percent children were in the age group 4-5 years and 38 percent children were in the age group 5-6 years. About half of the sample children (47%) were studying in Upper Kinder Garten (U.K.G.) and rest were in Lower Kinder Garten (L.K.G.) Total 100 parents are included as respondents out of which there were 56 fathers and 44 mothers. Twenty-eight percent of the parents of sample children were graduate. Thirty-six percent of them were postgraduate and 22 percent of them had professional degrees. Rest 14% respondents had doctoral degree. Twenty-five percent parents were employed in government service. Twenty-three percent of them were

lecturers and teachers. Nineteen percent of them were self-employed while 12 percent respondents were in private sector. Rest 11 percent were in varied professions. There were no statistically significant differences in education and occupation level of mothers and fathers.

Computer Usage by Children

A large number of sample children (49%) had learnt to use computer from their fathers while 32 percent children learnt to use computer from both mother and father. Interviews with children revealed that 48 percent of them liked to do colour and paint activities on the computer. The data presented in Table 1 indicates that 38 percent of the respondents had no regular schedule for computer usage. A total of 54 percent children spent between 5-20 minutes on computer per day. Similar results were found by Bank and Graham (2000) who revealed that the time that children spent on computers increased with age but the time period ranged between 5 to 20 minutes. It was also observed that majority of the children sought their father's help whenever they got stuck somewhere on the computer. Many other studies (Binder and Ledger 1985; Rosengren et al. 1985; Shade et al. 1986) have also revealed that children learn more and feel less frustrated when adult supervision at the time of their using computer is available.

Table 1: Average time spent by children on computer per day

<i>Time (in minutes) per day</i>	<i>n =100</i>
5-10	17
11-15	23
16-20	14
20-25	5
26-30	3
No regular timing	38

Parents' Perception Related to the Use of Computer by Children (3-6 years)

The results indicated that all the sample parents allowed their children to use computer and when asked about the age at which they allowed their children to use computers, 28 percent parents responded that children between the age 3-4 years became familiar with computer. About a similar number (27%) opined that 5-6 years is the earliest age when the child can be allowed to access computer. Similar results were

found in the study of Warner and Lynch (2004) which indicates that children use computers in the child care centre between the age 3 and 5 years. In response to the query about how did their children use computers, 75 percent of the parents responded that the child watched their parents working on computer. Forty percent of the parents responded that their children used computers almost daily for recreational activities and most of them preferred programs on educational CDs for their children. It was also found that a large number of parents (52%) had internet access in their homes but majority of them (57%) didn't allow their children to use internet. Contradictory results were found in the study of Grunwald (2003) which indicates that majority of the children use internet at home. Probably the contradiction could be due to the difference in the ecological setting of the two studies. When parents were asked about the benefits and disadvantages of computers, 17 percent parents responded that children's knowledge about colours, shapes, letters developed by using computers. Majority of the parents 34 percent responded that computer technology helped their children in exploring new concepts related to education. However, a large number of parents (49%) expressed their concern that eye-sight of their children got affected by using computers. Some parents (29%) responded that usage of computers is wastage of time or whenever their children used computer they gave least importance to their studies.

Relationship between Parental Characteristics, Parental Perception, and Computer Usage by Children

No significant relationship was observed between parental characteristics (education and occupation) and their perception towards the usage of computers by children thus indicating that education and occupation were not the major factors determining the perception towards computer use. The data presented in Table 2 reveals that there was significant difference between the parents' perception and duration of their children's computer use. Thus it was found that more positive the perception of parents towards computer, more the time spent by children in using computer, since parents with positive perception provided more facilities and encouragement to their children to use computer.

Table 2: Relation between parental perception and average frequency of computer use by children

Duration	Positive	Negative	Mixed	Total
Daily	18	3	19	40
Weekly	14	9	15	38
Occasional	4	7	11	22

Calculated $\chi^2 = 16.44$, df =4, table value =9.49. significant at $\alpha = .05$

CONCLUSION

Computers are fast emerging as educational aids for all children, even in developing countries like India. It is vital to study the factors affecting the use of computers by children so as to maximize positive use of this aid. Parental perception about use of computers by children is one of the most vital factors in this regard. The present study was thus undertaken to understand the relationship between parental perception and use of computers by young children. On the basis of results above, it could be concluded that all the parents included in the study allowed their children to use computer almost daily for recreational activities. Majority of the sample children spent 5-20 minutes on computer per day. It was also found that majority of the sample parents allowed their children to use computer latest by the age of 3 years. While studying the perception of parents towards usage of computers by their children, majority of parents viewed computer as a beneficial learning tool for their children. Some of the parents, however, expressed concern about the negative impact of computer usage by their children. Similar results were found in the study of Sue (1984) which reveals the benefits and limitation of computer with young children. Further, in the present study parental perception was found to be independent of parent's educational status and occupation. However, duration of computer use by children varied according to parental perception, since parents having more positive perception about computer use allowed their children to use computers more frequently. The study reveals the acceptance of the computer as an educational aid at home. Increased parental awareness and information about computers will definitely help the parents to further enhance positive use of computer for their children.

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