

Korean parents' perceptions on the importance of computer usage for themselves and their children: An exploratory study

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ABSTRACT

Many families today have access to computers that help them with their daily living activities, such as finding employment and helping children with schoolwork. Minority families residing in the United States though often do not own home computers. With a greater number of immigrant families arriving to the United States, questions are raised whether parents unfamiliar with the new culture view computers as important teaching tools for themselves and their children. An exploratory study was conducted looking at Korean parents whose children were enrolled in a Southern California elementary school, since this minority group consistently falls within the top ten immigrant sending countries. The study's purpose was to examine parent perceptions on the importance placed on computer usage for themselves and their children. Findings suggest that Korean parents place a high value on computer usage and see it as vital to job success and academic achievement.

Keywords: Korean parents, Korean children, computer use, parent perceptions of computer use

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Introduction

With the latest technological advancements in computer design and the accessibility to global knowledge, we find ourselves connected with world events at a touch of a keyboard. Computers are a part of everyday experiences and families are realizing the indispensability of having access to them. Indeed, multimedia CD-ROMs, software programs, the Internet, and electronic mail have increased people's understanding of computers. Greater understanding has brought greater ownership. Between 1990 and 1997, the percentage of households' owning computers jumped from 15% to 35% (U.S. Dept of Labor, 1999). According to a recent study conducted by the Pew Research Center (2007), computer ownership in the U.S. is at 76%.

In spite of the growing use of household computers in the United States, minority families are often considered non-traditional members of society who often find themselves on the non-technology side of the 'digital divide' (Abrams, 1997; Chakraborty and Bosman, 2005; Hoffman and Novak, 1998; Kominski and Newburger, 1999). That is, the gap between those who have access to and can effectively use information technologies and those who cannot (Wilhelm, 2001). As such, the use of computers or having access to the Internet is still unknown to many minority families (Migrant Education Consortium for Higher Achievement [MECHA], 2001).

Families from minority backgrounds with little or no computer skills are often placed at a disadvantaged. Brogan (2000) points out that the emerging, digital generation (from K through middle-school) has been exposed to computers since birth and use technology as an indispensable part of their lives. These children enter school with technology skills and expectations that are very different from children who have not used a computer before they enter school. Thus, minority children may not receive the necessary guidance from parents who lack computer technology experience.

Parental influence on their children's learning

Parents play an important role in the education of their children (Hoover-Dempsey and Sandler, 1997). They are oftentimes the entry point, the initial contact by which young children are exposed to the function, purpose, and value of a computer, and their attitudes greatly impact those of the child (Sanger, 1997). This phenomenon occurs in most childhood learning situations (Hao and Bonstead-Bruns, 1998; Hoover-Dempsey and Sandler, 1995; Sailor, 2004). For example, if parents hold favorable perceptions of a learning tool, such as computers, then in all likelihood the child will incorporate similar attitudes. Thus, a computer can be beneficial or detrimental to a young learner depending on how it is modeled as a training tool and the attitudes held towards it by the parents. Understanding parental feelings and attitudes towards computers may assist school personnel in determining type, frequency, and theme of homework assignments, thus allowing families to engage in tasks that they are comfortable with.

Parental Perceptions of Computer Use

Although more parents today use computers compared to two decades ago (U.S. Dept. of Labor, 1999; Pew Research Center, 2007), very limited information has been

collected on their perceptions of the importance of these technological tools for themselves or their children. The few studies that exist suggest that parents associate computer use with academic achievement and job success. For example, in one early study, Visser (1987) found that parents desired computers as part of their children's education and believed that with computers, achievement scores would increase. In another study (Scherer, 1990), 88 sets of parents were asked to complete a questionnaire as to why they enrolled their 4- and 5-year-old children in computer classes and their attitudes towards the importance of computer competence. The two primary reasons for enrolling their children in these classes were so that they could have fun and learn about computers at an early age. Yet, parents also felt strongly that computers would help them with skills needed for other learning, such as math and reading. Finally, Wentworth and Connell (1995) asked 30 parents to complete surveys on their perceptions of the use of computers for teaching math to their elementary age children. Knowledge of computers was found to be important to the parents and felt that math skills, which they saw as job related, could be taught using this form of technology.

Instead, researchers have concentrated their attention on factors that impact children's computer use, such as their perceptions of technology (Jarvis and Rennie, 1998), the impact of computers on their physical, cognitive, and social development (Anderson and Butcher, 2006; Subrahmanyam, Kraut, Greenfield, and Gross, 2000), and computer use in the home and in the school (Mumtaz, 2001). In addition, there are voluminous pages of statistical figures on the average number of computers in American homes, the socioeconomic status of families who own computers, the increased computer usage by children and adults in the past decade, and the use of the Internet at home, work, and school (Chakraborty and Bosman, 2005; Kominski and Newburger, 1999; U.S. Dept of labor, 1999). Yet, despite the large amount of data collected in these areas, the investigation of parent perceptions on the importance of computer usage has remains relatively neglected.

Minority Families and Computer Use

As scant as the findings are on parent perceptions of computer use within Euro-American families, data on minority parents are nearly non-existent, although there does exist some demographic and descriptive information. For instance, Hoffman and Novak (1998) suggest, from survey findings, that White families are likely to own a computer and access the Internet more often than African-American families. Factors that influence this disparity include income and education. The Migrant Education Consortium for Higher Achievement (2001) reports that the use of computers or having access to the Internet is still unknown to many Latino, migrant families. Also, Kominski and Newburger (1999) state that people of White and 'other' races have much higher levels of computer ownership than African-Americans or Hispanics based on education levels. And, between 1990 and 1997, all minority groups increased their ownership of personal computers (U.S. Dept of Labor, 1999), with Koreans showing the largest percentage point change, expanding from 25% in 1990 to 49% in 1997.

Unfortunately, because of the scarcity of studies on parent perceptions, we are left to extrapolate from research in the area of 'parent aspirations' that families who have a high regard for academic achievement (Hao and Bonstead-Bruns, 1998; Hoover-Dempsey and Sandler, 1995), also recognize and welcome the importance of

technological advancements, such as computer usage. But without a thorough and systematic investigation, it will never be known for sure.

Demographic Profile of Korean Families

The minority profile of the United States has been changing dramatically over the past thirty years. Since the passage of the Immigration Act of 1965, an increasing number of Korean immigrants have come to the United States each year (Hurh and Kim, 1990). Among the top ten immigrant sending countries to the United States, Korea has ranked eighth for the past decade (Center for Immigration Studies, 2005), with a total of 1 076 872 residing within this country (Yu and Choe, 2003). Between 1990 and 2002, 278 000 alone immigrated to the United States, with a 34% increase during this period.

In California, Korean families make up 2.7% (N=76 053 families) of the total immigrant population (Yu and Choe, 2003). Orange County is the third largest Korean populated geographic area (N=55 573) within this state. The city of Fullerton, which is located in Orange County and is where the current study was conducted, has 9 093 Koreans residing within its boundary.

The researchers chose Korean families for this exploratory study because of their growing numbers in Southern California schools and because no research has been conducted on their perceptions on the importance of computer usage for themselves and their children. With the continual increase of immigrants into the United States comes the need to understand the importance that minority parents place not only on educational achievement and employment but also on the means by which they and their children hope to attain them. Therefore, the current study was driven by the following questions:

- How often do Korean parents use computers?
- Do Korean parents view computers as important learning tools?
- Do Korean children use computers to complete schoolwork, and if so, are parents involved?
- What role do Korean parents see the schools having relative to children and computer use?
- Do Korean parents see a relationship between computer use and academic achievement?

Method

Participants

The participants in this study consisted of Korean parents whose children were enrolled in grades K through 6th in a Southern California public school. The elementary school has a minority, 85% of the overall student population, 35% of which are English language learners. Students of Korean descent are the largest minority group (53%) at the school. The school is located in a middle- to upper-socioeconomic neighborhood and is within a school district where parent involvement in their children's education is greatly emphasized.

Procedure

The elementary school was selected for this exploratory study because of its large Korean student enrollment. The researchers met with the school principal who was asked to speak with the teachers from grades K through 6th and inform them of the proposed study. The researchers provided the principal with the required number of surveys in English and Korean, who then distributed them to each teacher. The principal placed a two-week deadline for the parents to return the surveys. There was an incentive of an additional recess for classes that had high survey return rates.

Instrument

A survey, consisting of 24 questions, was disseminated to the families of the entire school population (N=957). The first section of the instrument was comprised of 9 demographic questions, such as parent minority and educational background. The second section of the survey consisted of 6 questions that asked parents about their perspectives on personal computer usage. The third section consisted of 9 questions which asked for parents' attitudes on their children's computer use (See Appendix for copy of parent survey).

Results

Out of a total of 957 surveys disseminated, 596 (62%) were returned. Of the 596 surveys returned, 356 (60%) were from Korean parents. For the purpose of this paper, only data from surveys returned by Korean parents will be presented since the study's goal was to look specifically at this minority group.

Demographic Characteristics

The respondents consisted of 356 Korean parents whose children were enrolled in grades K through 6th. Two hundred thirty one females (64.9%) filled out the surveys as compared to 122 males (34.3%). Three respondents did not identify their gender. As shown in Table 1 below, two thirds of the parents (75.3%; N=268) were primarily 1st generation to the U.S. (See Appendix, survey question #2, for definition of generation level).

Table 1 Parents' Generation Level

Generation	N	%
1 st	268	75.3
2 nd	66	18.5
Missing Data	22	6.2
Total	356	100

Table 2 shows that the majority of parents (72.2%; N=257) had attended college with a smaller proportion of respondents (17.1%; N=61) having completed post graduate work. Annual income for almost half of the respondents (49.7%; N=177) varied between \$46,000 and \$60,000+ (Table3).

Table 2 Parents' Education Level

Schooling Completed	N	%
High School	35	9.8
Some College	100	28.1
College Graduate	157	44.1
Post Graduate	61	17.1
Missing Data	3	.8
Total	356	100

Table 3 Parents' Annual Income

Salary Range	N	%
Below \$30 000	26	7.3
\$31 000-\$45 000	30	8.4
\$46 000-\$60 000	47	13.2
Over \$60 000	130	36.5
Missing Data	123	34.6
Total	356	100

Table 4 indicates that the respondents' children were primarily older elementary school students (i.e., 4th, 5th, and 6th) (56.2%; N=199).

Table 4 Child's Grade Level

Grade	N	%
K	29	8.1
1 st	36	10.1
2 nd	37	10.4
3 rd	49	13.8
4 th	68	19.1
5 th	60	16.9
6 th	71	19.9
Missing Data	6	1.7
Total	356	100

Descriptive Characteristics

In relation to computer ownership and usage, the majority of parents (97.8%; N=348) disclosed that they had a computer at home, with most accessing it on a daily basis (79.2%; N=282). On average, there were at least one and a half computers in each respondents' home (M=1.74; SD=.861). Most parents (90.7%; N=323) also had Internet capability on their home computer, with over two thirds of the respondents (80.3%; N=286) using the Internet on an almost daily basis (Table 5).

Table 5 Internet Access

How often	N	%
Every day	173	48.6
1-3 times a week	113	31.7
Once every two weeks	13	3.7
Once a month	9	2.5
Other	13	3.7
Missing Data	35	9.8
Total	356	100

Parents' Computer Usage

A majority of parents (77.5%; N=462) have used a computer for at least three years or longer. Almost all respondents (95.5%; N=340) overwhelmingly agreed that computers were important learning tools, and that knowing how to operate a computer was related to acquiring successful jobs (88.5%; N=315). In a surprise finding, nearly two thirds of the parents (73.8%; N=263) felt that using a computer at home was more helpful than going to the library, and yet, almost half the respondents (48%; N=171) reported that they could get by without the aid of a computer in their home.

Children's Computer Usage

Parents generally agreed that it was important that their children have access to a computer at home (87%; N=310), as well as at school (91.8%; N=327); with a slightly smaller proportion of respondents (80%; N=285) reporting that their children used a computer to complete homework assignments. Many parents (79%; N=281) also felt that learning to use a computer should be taught in school just like any other content subject, so that children could begin from an early age developing study habits and doing homework with the aid of this tool (84.8%; N=302).

Many parents agreed (81.1%; N=289) that children knowing how to use a computer would do well in school. A smaller number of parents (69.7%; N=248) reported getting involved in their children's education with the help of a computer. On the subject of monitoring, almost all parents (90.4%; N=322) saw it as their responsibility to supervise what their children viewed on the computer. Finally, most parents (89%; N=317) saw a positive relationship between their children knowing how to use a computer and being successful in life.

Discussion

Current research findings suggest that minority families are less likely to own household computers and have access to the Internet than White families. They often fall on the non-technology side of the 'digital divide' which places them at risk of not achieving academically and/or occupationally. Therefore, the goal of this exploratory study was to look at a sample of minority (Korean) parents and their perceptions on the importance of computer use for themselves and their children.

Relative to the questions driving the investigation, the findings suggest that most Korean parents rely heavily on home computers. They tend to access them on an almost daily basis. With an average of one and a half computers per household, it was expected that usage would be frequent, with family members having easier access than if they waited in line at a public library or 'cyber' café. This finding was not surprising given that the parents in the study reside in middle- to upper-socioeconomic neighborhoods, with many having attended college and earned substantial annual incomes. It was also not surprising that almost all the respondents viewed computers as important learning tools, thus complementing studies by Hoffman and Novak (1998), and Chakraborty and Bosman (2005), that higher education and income levels positively influenced computer usage and ownership.

In addition, not only have most of the parents used computers for at least three years or longer, they also seemed to be involved in their children's education with the

help of computers. That is, many parents reported that their children completed homework assignments using a computer while they assisted. Parents saw schools as having a vital role in educating their children on the use of computers. They strongly felt that schools should provide access to computers, and that computer training should be made part of the overall school curriculum, such as math and English. Finally, parents believed that learning about and using computers would assure success for their children in school and in finding a job.

As previously mentioned, a surprise finding was that nearly two thirds of the parents felt that operating a computer at home was more helpful than using the library. Yet, when asked if they could get by without the aid of a computer at home, nearly half of the parents responded yes. This indeed seemed to be a curious anomaly. On the one hand, there is an extensive, daily reliance on computer technology by Korean families. But on the other, parents feel that they could continue to perform daily functions without these electronic devices.

It can only be speculated why this disparity exists since no qualitative data were collected. Two hypotheses are offered. The first is that although Korean parents and their children are users of today's technological tools, they are not "addicted" to them. For example, they may operate computers to access the Internet, send email messages, and word process, but these are functions that can still be performed by cell phones, library resources, post offices, and typewriters. The second reason is that many of the parents may not have understood the question being asked of them. Since a large number of respondents were 1st generation to the U.S. and English was not their first language, they may have inadvertently reversed the meaning of the question. That is, by agreeing to the question, they thought they could *not* get by without the aid of a computer. This particular question will have to be re-examined more closely for future studies.

In light of the study's findings, future research on this topic is necessary. A limitation of the current study is its focus on a school located in a middle- to upper-socioeconomic neighborhood. A similar investigation that looks at Korean parents from a school located in a lower-socioeconomic neighborhood would be beneficial to compare to the current study. This would allow for additional exploration on whether socioeconomic backgrounds play a key role in perceptions on computer importance.

Parent minority is another key element that would be worth exploring in greater detail. An investigation of parent perceptions within a range of minority groups (and socioeconomic backgrounds) would help provide additional insights that could possibly lead to useful comparisons. In particular, the study of immigrant parent groups, in and of themselves, would also be revealing.

In addition to the two areas described above for future research, we recommend employing a different research framework. The use of qualitative research methodology would allow a rich data set to be collected that could help provide deeper insights into parent responses. Thus, a follow up study that includes individual and group interviews of the Korean parents who were part of the original study would be advised.

Additionally, any new studies conducted should use a mixed-method approach (i.e., qualitative and quantitative).

Continued research with the current study could move in several complementary directions based on investigations by Wellington (2001), who studied computer use at home in the United Kingdom. He proposed various questions for future research that we believe relate to the current study. We suggest though modifying his questions by including the element of minority. They include;

- What relevant experiences related to computer use in the home do children bring to school from various minority groups?
- What is appropriate use of computers in the homes of various minority groups?
- Do different minority groups use computers in the home for different purposes?
- What impact does having computers at home have on achievement of students from various minority groups?
- How should teachers design learning tasks for individuals at home that include minority themes?

The answers to these questions would give teachers, parents, administrators, and policy-makers useful data to consider as they make decisions about computer use in schools and homes.

In conclusion, various findings of this study were similar to previously reported investigations on parent perceptions of computer usage. Demographic variables, such as income and education, were found to be linked to computer ownership and its use when parents had attended college and earned substantial annual incomes. New information was also presented above, such as parent attitudes towards monitoring their children's computer time and the role of the schools in providing computer classes. Additional studies of this nature are highly recommended given the dynamic minority and population changes that are currently occurring in the United States.

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Appendix

Parent Survey

1. Person filling out this survey: ___ male; ___ female
2. We would like to know how long you have lived in the U.S. based on your generation status. For example, 1st generation is someone who immigrated to the U.S. from another country, 2nd generation is anyone born to parents who immigrated from another country, and so on: ___ 1st; ___ 2nd; ___ 3rd; ___ other (please identify) _____
3. How would you describe your minority background: (for example, Korean, Mexican American, etc.): _____
4. What grade is your child in? _____
5. What was the last grade you completed in school? ___ Elementary School; ___ High School; ___ Some College; ___ College Graduate; ___ Post Graduate
6. Do you have access to computers on a daily basis? ___ yes; ___ no.
7. Do you have a computer at home? ___ yes; ___ no.
If yes, how many computers do you have at home? _____
8. Do you have access to the Internet at home? ___ yes; ___ no.
If yes, how often do you access the Internet at home?
___ Every day ___ 1 to 3 times-a-week ___ Once every-two-weeks ___ Once a-month ___ Other
9. What range does your family's annual income fall between? (This question is optional)
___ 0-\$15,000 ___ \$16,000-\$30,000 ___ \$31,000-\$45,000 ___ \$46,000-\$60,000 ___ over \$60,000

Parents' Computer Usage

Instructions: Please circle the response that best describes your feelings about your computer usage.

10. My knowledge of using the computer is:

I do not know how to use the computer	I'm learning to use the computer	I have used the computer for at least 1 year	I have used the computer for at least 3 years	I have used the computer for at least 5 years
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11. If I don't know how to use a computer, I would like to learn:

Strongly disagree	Somewhat disagree	No comment	Somewhat agree	Strongly agree
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12. Computers are important learning tools:

Strongly disagree	Somewhat disagree	No comment	Somewhat agree	Strongly agree
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13. Those who have successful jobs know how to use the computer:

Strongly disagree	Somewhat disagree	No comment	Somewhat agree	Strongly agree
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14. Using a computer at home is more helpful than going to the library:

Strongly disagree Somewhat disagree No comment Somewhat agree Strongly agree

15. I can get by without having a computer in my home:

Strongly disagree Somewhat disagree No comment Somewhat agree Strongly agree

Children's Computer Usage

Instructions: Please circle the response that best describes your feelings about your child's computer usage.

16. It is important that my child has access to computers at home:

Strongly disagree Somewhat disagree No comment Somewhat agree Strongly agree

17. It is important that my child has access to computers at school:

Strongly disagree Somewhat disagree No comment Somewhat agree Strongly agree

18. My child uses the computer for help in homework:

Strongly disagree Somewhat disagree No comment Somewhat agree Strongly agree

19. My child should be taught how to use a computer as much as she/he is taught other subjects like math or reading:

Strongly disagree Somewhat disagree No comment Somewhat agree Strongly agree

20. It is important that my child learns how to use a computer so they study and do their homework:

Strongly disagree Somewhat disagree No comment Somewhat agree Strongly agree

21. Knowing how to use a computer will help my child do well in school:

Strongly disagree Somewhat disagree No comment Somewhat agree Strongly agree

22. I get involved in my child's education with the help of a computer:

Strongly disagree Somewhat disagree No comment Somewhat agree Strongly agree

23. Parents should monitor their children's computer usage:

Strongly disagree Somewhat disagree No comment Somewhat agree Strongly agree

24. My child will need to know how to use a computer in order to be successful in life:

Strongly disagree Somewhat disagree No comment Somewhat agree Strongly agree

Thank you for your time in filling out this survey!