ICT Usage among Low Socioeconomic Parents

Andrew Fitzgerald

Cal State University Long Beach

EDP 520

Background

Learning Management Systems are online web based ICT portals providing parents and students access to school related information. Information regarding grades, assignments, behavior, attendance, as well as providing a means of communication between the user agent and a school's personnel, such as teachers, counselors, and administrators. The creation of this technology is synonymous with development of new forms of communication and information accessibility brought on by the technological advances made in the past decade. Computers have become smaller, mobile, and internet access has become easier through wifi and mobile network connectivity. The cost of computer technology has sunk in the past decade, thanks to increased efficiency, better engineering, and reduction of material costs. The "Digital Divide" of the mid 1990s has decreased dramatically because of the advances in network connectivity, software, and lower cost technology. Associated with low socio economic households, the Digital Divide represented the difference in access to technology between low SES and higher SES households, and the disadvantages brought on by it such as student achievement. Without access to information via the internet, low SES students were not able to keep up with the higher achieving high SES students academically. Another factor contributing to low achievement is parental involvement (Brickman, Oyserman, & Rhodes, 2007). Research has shown students with academically involved parents have higher academic achievement in school.

The Digital Divide has changed. Low SES household's access to computer technology and the internet has increased due to the increased affordability and availability. Many schools are adapting internet based ICT such as a Learning Management System, creating more opportunities for parents of low SES households to acquire information and become more involved with their child's academics while not intruding on their busy work schedules. This

opportunity for increased involvement and academic awareness could in turn lead to achievement gains amongst low SES students.

Problem Statement

Whereas the Digital Divide has decreased in terms of access, it has mutated into a new division among low SES and high SES households concerning digital skills. Without the skills necessary to navigate a school's LMS, the possibilities for increased academic achievement through parental involvement can't be obtained. Research shows low SES parents are lacking the knowledge, concepts, and skills of using today's technology to navigate the web and find information online. This could have a direct effect on their self-efficacy, their belief they have the intellectual means to help their child academically. However, there is a deficiency in research to substantiate a correlation between having the knowledge of today's necessary computer and web skills and whether it affects the usage frequency of a school's ICT. Obtaining such data could help school districts, teachers, and educational researchers in their ongoing challenge of raising student's academic achievement through increased parental involvement.

Purpose

The purpose of this quantitative study is to find evidence of a correlation between low SES parent's computer skills and their usage of a school's Learning Management System (ICT). The study will look at the differences in LMS usage amongst low SES parents at an urban Long Beach school serving low SES households. A control group of parents will be compared to a group of parents who participate in a course designed to teach the skills necessary to navigate and use the school's LMS using a variety of computer technologies. After completion of the course, the selected parents will complete a survey designed to measure their frequency of the

school's ICT usage, as well as their perceptions of their own self-efficacy regarding their child's academics. Frequency of use and perceptions will be compared between both groups of parents.

Theoretical Framework

Parental Involvement & Achievement in Low SES Schools

Parental involvement has a positive indicator of higher academic achievement. Parental involvement is influenced by communication, role construction, and teacher and students invitations for involvement (Closson et all 2005). Low performing schools that serve low socio economic households have a low rate of parental involvement due to the constraints low SES parents face such as the time and energy required.

Information and Communication Technology

Information and Communication Technology (ICT) is computer technology structured to provide access of information to a user base. Different variations of ICT such as Learning Platforms and Learning Management Systems are being incorporated into school systems to give parents, students, and communities access to student information regarding academics and curriculum. Access is provided through an internet based portal and can be reached through an internet connected computer device.

Digital Divide

The Digital Divide was coined in the 1990s to define the limited access economically disadvantaged families had to computers and the internet compared to their upper and middle class counterparts.

Mobile Technology

Mobile technologies such as smartphones have been around for over a decade, but only after the introduction of Apple's iPhone did smartphone adoption become mainstream. Google's free Android UI allowed manufacturers to develop and saturate the market with a wide variety of smartphones. Market competition increased, leading to lower competitive prices, allowing the adoption of smartphones to reach new economic levels of consumers. Concurrently the tablet market has also become relevant with Apple introducing its iPad tablet. Competition to lure consumers to their products will again spur price wars, which will again allow access for the lower socio-economic household.

Diffusion

Diffusion describes the manner and process of which a technological innovation is adopted into society. Over time new innovations are gradually accepted and adopted as everyday practice. Users are categorized according to their rate of adoption, and certain groups have an influence and persuasion that gradually increases the adoption rate among other groups.

Research Questions and Hypothesis

The study is design and conducted to answer the following questions:

1) Does the lack of parental usage of a school's LMS a result of the parent's ignorance of the computer skills necessary to navigate and use the system?

    a. H1 : There is a significant difference in the frequency of LMS usage amongst the Low SES parents attending computer skills workshops and those who do not.
    b. H0 : There is no significant difference in frequency of LMS usage amongst the Low SES parents attending computer skills workshops and those who do not.

2) After being taught the computer skills necessary to navigate and use a LMS, would there be an increase in usage frequency?

    a. H1 : There is a significant increase in frequency of LMS usage amongst the Low SES parents who attended computer skills workshops.
    b. H0 : There is no significant increase in frequency of LMS usage amongst the Low SES parents who attended computer skills workshops.

3) After obtaining the skills necessary for using a school's LMS, would low SES' parent's self-efficacy increase?

    a. H1 : There is a difference in Low SES parent's academic self-efficacy amongst parents who attended computer skills workshops and those who did not.
    b. H0 : There is no difference in Low SES parent's academic self-efficacy amongst parents who attended computer skills workshops and those who did not.

Significance of the Study

There is a gap in the academic achievement of Low SES children and their High SES peers. Parental involvement such as self-efficacy has been positively linked to increasing a child's academic scores. A school's ICT portal provides a gateway for parents to be actively involved in the child's academics regardless of time and location. Data from this study will provide academic institutions information in regards to the efficiency of their ICT. Are parents using it? If not, is it because they don't know how?

Literature Review

The purpose of this study is to find a relationship between the computer skills and concepts of low socio-economic parents and their usage of a school's ICT. A school's ICT can increase low SES parent's involvement, which could lead to higher academic achievement of their child. In order to justify this assumption, research was gathered pertaining to the different facets of parental involvement and the challenges low SES families face that can influence their involvement with school and academics, as well as recommendations and strategies for increasing parental involvement. Computer technology is rapidly evolving and ICT is a new technology being incorporated into the school systems. Research was gathered specific to ICT in the school system, and needed to be recent in order to stay relevant to today's technological lifestyles of parents and students. Quantitative and qualitative studies of minority parent's computer skills were analyzed to find the issues that could relate to their low usage of ICT and shape the argument for a new digital divide present among low SES families. Rogers Diffusion of Innovation Theory is discussed, as it influences the quantitative design of this study. Research was gathered from peer-reviewed articles using the ERIC database website.

Parental Involvement

Across all grade levels parent involvement is beneficial to both low and high achieving students (Crosnoe, 2001). Parental involvement consists of different facets, some of which include communication and role construction. Parental communication is the interaction between the parent and teacher, administrator, counselor, or other school officials. Once limited to face-to-face or through a telephone call, communication is now achievable through various means of technology. Involvement decisions are also determined by a parent's role construction,

specifically their self-efficacy. Parental self-efficacy is a parent's belief that they have the knowledge and skills to make a difference in their child's academics. This is influenced by their personal experiences of success and motivates them to engage themselves in involvement activities (Closson et all, 2005). Self-efficacy perceptions help shape the levels of involvement activities, and coupled with time and energy can increase home-based interactions (Closson et all, 2005). Perceptions of how involvement is relevant to their child can also incline a parent to participate more (Anderson & Minke, 2007). Involvement is also influenced by school practices, teacher invitations, and feeling welcomed and invited by the school. (Anderson, 2007; Bevans, 2005)

Parental involvement in Low Socio-Economic Schools

Low SES status plays a significant role in predicting a child's academic achievement (Bowen & Lee, 2006) and can lowers a parent's optimism of their child's education (Crosnoe, Mistry, & Eldar 2002). Research shows parental involvement can lead to higher educational aspirations and can increase positive academic outcomes and orientations. (Bevans, 2005; Cooper, 2007). The positive correlation between parent involvement and academic orientation is tighter amongst low SES families. Research shows economically disadvantaged children with highly involved parents are more academically oriented than their counterparts with parents with a low level of involvement (Cooper & Crosnoe, 2007). Proven results include higher literacy performance amongst elementary children, lower anxiety amongst girls, and improving the achievement of children at risk of academic failure (Dearing, 2006; Goldberg 2009).

Factors of Low SES Parental Involvement

Getting parents of low SES households to be involved is not an easy task, as they face barriers and circumstances preventing their involvement. The parents work multiple physically demanding jobs, lack transportation, the time, energy, and access to be involved (Cooper, 2007; Ingram, 2007). Father's busy work schedules make them even less available and less involved (Goldberg & Tan, 2009). Latino parents lack the English fluency to communicate, suffer from feelings of poor self-worth, are only likely to be involved when their child isn't doing well in school, and level of involvement has been described as low to non-existent (Bowen, 2006; Ingram, 2007). Whereas family discussions on academics occur frequently in non-poor, European American homes of highly educated parents, less privileged parents lack to the confidence to engage their children in academic discussion, and generally leave that task to the teacher (Lee & Bowen, 2006).

How Can We Improve Involvement?

In order to overcome the barriers of work schedules, transportation, anxiety, and language barriers, schools must create opportunities of parent-teacher communication outside of the school setting (Lee & Bowen, 2006). A variety of channels to increase parent-school communication must be implemented. Parents that are well informed of student's progress leads to higher achievement among low SES serving schools (Closson, 2005; Davis, Jess, & Pokorny, 2004). Successful communication amongst teachers and parents provides insight to school procedures, reinforces the flow of information between home and school, and leads to school related discussions at home (Cooper & Crosnoe 2007). This teacher-parent communication develops into interpersonal relationships, increasing the level of involvement of low SES parents. Accommodations to increase communication can be made via letter sent home in different languages, meetings in the evening, and flyers around the community (Gaetano, 2007). When

parents perceive of feeling of being welcomed, valued, and received by a school, this perception is a strong predictor of parental involvement (Bevans, 2005). Increases in family involvement in school may lead to more positive feelings and higher self-efficacy towards education (Dearing, Kreider, Simkins, & Weiss, 2006)

Information and Communication Technology

Information and communication technology (ICT) is using technology as a way to access, consume, and communicate information. The increase in ICT use is a result of the increase in hardware, software, and network connectivity of present day computer technologies. ICT can manifest itself in education through various means, such as Student Information Systems (SIS), Learning Platforms (LP), and Learning Management Systems (LMS) to provide instant student data concerning attendance, learning, and behavior. ICT integration into schools is being encouraged worldwide to enable members of the school community to access learning resources, communicate, collaborate, monitor, assess, and report. They provide a new way for schools to distribute newsletters, bulletins, and important messages to parents. Parents have access to homework and a new way to communicate with teachers and administrators. Research shows ICT is used to enhance and reinforce forms and routines of school and parental engagement (Banji, Clark, Hadjithoma-Garstka, & Selwyn, 2011).

ICT integration into the school through a school portal has proven to show significant results. Recent studies have shown positive results in parent's reception of using the new technology. Teachers are able to communicate with parents in regards to their child's achievement, and parents have access to homework assignments and homework "batches," enabling them to hold their child accountable in their completion (Daniel & Hinson, 2001).

Enhanced communication and sharing of information between parents and schools have resulted in better cooperation, more efficient discussions, increased understanding and trust, less arguing, and tighter relationships (Pinto & Telum, 2004). Parents appreciated and enjoyed the unobtrusiveness and relative ease of finding information regarding their child's academic progress (Daniel & Hinson, 2001) and their increased engagement increased their parental involvement.

The Digital Divide

The "Digital Divide," A termed coined in the 1990s, initially described the inequalities between those with access to technology and those without. Desktop computers and internet access was expensive, creating a gap among those who could and could not afford it. Low SES families were in the "have not" group and could not benefit from home computer and internet access's advantages. Over time the cost of these technological goods has decreased. Computers have mutated from bulky desktops to thin lightweight laptops, tablets and smartphones. Internet access has evolved from a frustratingly slow dial-up service to an always connected high speed broadband connection. Wifi hotspots, CMDA, HSPSA+, WiMax, and LTE services enable our laptops and mobile devices to access the internet whenever we need to (Ahn, 2011).

The Digital Divide has changed. No longer is access the main factor keeping low SES families from using technology (Ahn 2011; Knobel, 2004). Low SES minorities are now the fastest growing group of internet users in the country (Castells, Fernandez-Ardevol, & Qui, 2004) using the same technology as their high SES counterparts (Matuchniak & Warschauer, 2010). A new has been created; a "Digital Skills" Divide (Jansen, Martland, & Rothbaum, 2008). Digital skills include the knowledge and concepts pertaining to managing and maintaining

computer hardware, User Interface navigation, and operating system hierarchal structure and navigation. Without the knowledge to use these readily available resources, low SES are still unable to take advantage of the access they have to their child's academic information using ICT.

Diffusion

The adoption rate of innovations in technology has been best described by Roger's Theory of Diffusion. His theory categorizes people into categories as seen in Figure 1; innovators, early adopters, early majority, late majority, and laggards based on their adoption of using new technology over time (Sahin, 2006).

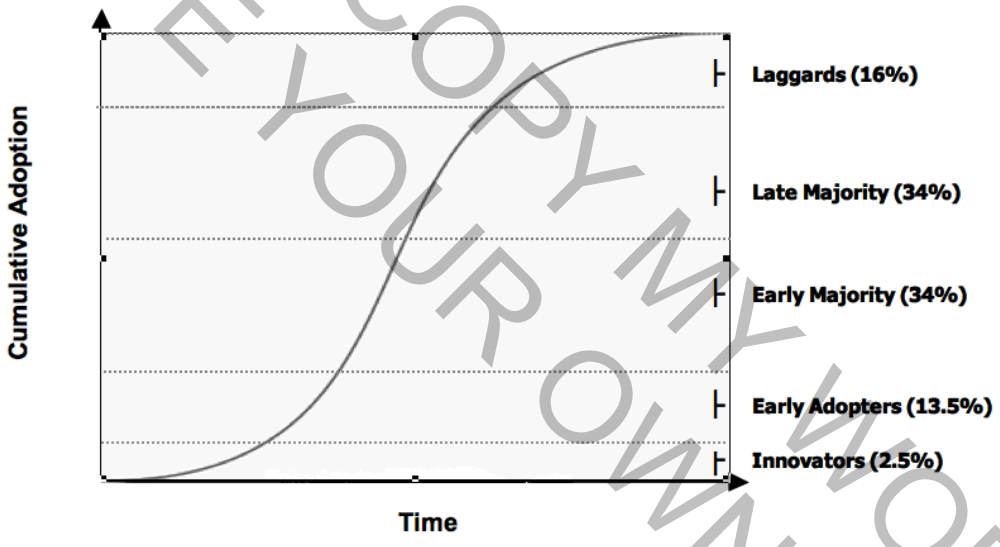

Figure 1. Rogers' Categories of Adoption Rate over Time.

The same theory can be applied to the adoption rate a school's ICT by parents. Some parents are willing to embrace using an ICT, whereas others are skeptical and likely need persuasion or peer pressure to influence their adoption (Dearing, 2009). A strong persuasion may already exist, as recent studies show that parent's associate computers with academic and

job success, and believe that academic scores will increase with the use of computers (Green, Lim, & Ortiz, 2011).

Summary

Studies show there is an increasing adoption of ICT into schools in order to provide greater access to information (Barron, Hohlfeld, & Ritzhaupt, 2010). Academic information regarding a student's learning, behavior, and attendance, are readily available for low SES parents through internet connected computers and mobile technology. This new means of access overcomes the low SES barrier of time and energy that previously constrained parents from getting involved in their child's academics. However, studies have shown a new Digital Divide of computer knowledge and skills could be preventing low SES parents from embracing and using this new means of access. If this new barrier can be overcome, low SES can be more involved with their child's academics via communication and self-efficacy, and in turn could raise the academic achievement of students growing up in low socio-economic families.

Methodology

There is a deficiency in research on the relationship of Low socio-economic parent's computer skills and knowledge and how it affects their usage of a school's ICT. This quantitative study aims to answer the research questions related to low SES parent's computer skills/knowledge and ICT usage:

1) Does the lack of parental usage of a school's LMS a result of the parent's ignorance of the computer skills necessary to navigate and use the system?

a. H1 : There is a difference in the frequency of LMS usage amongst the Low SES parents attending computer skills workshops and those who do not.
b. H0 : There is no difference in frequency of LMS usage amongst the Low SES parents attending computer skills workshops and those who do not.

2) After being taught the computer skills necessary to navigate and use a LMS, would there be an increase in usage frequency?

a. H2 : There is a significant increase in frequency of LMS usage amongst the Low SES parents who attended computer skills workshops.
b. H0 : There is no significant increase in frequency of LMS usage amongst the Low SES parents who attended computer skills workshops.

3) After obtaining the skills necessary for using a school's LMS, would low SES' parent's self-efficacy increase?

a. H3 : There is a difference in Low SES parent's academic self-efficacy amongst parents who attended computer skills workshops and those who did not.
b. H0 : There is no difference in Low SES parent's academic self-efficacy amongst parents who attended computer skills workshops and those who did not.

Method & Design

A true experimental design will be used to provide strong statistical evidence of whether the lack of ICT usage among low SES parents is due to their lack of knowledge and skills

needed. By separating random participants into two groups of control and treatment, the independent treatment variable is controlled to provide more reliable evidence. A self-created sample survey is used to narrow down prospective participants and measure their usage frequency of the schools ICT to establish baseline data. Participants are randomly placed into a control and treatment group. After the treatment group has been exposed to the treatment via instructional workshops, another self-created survey is used to measure both groups ICT usage and self-efficacy.

Participants

In order to be relevant, participants are selected from an urban middle school serving mainly low socio-economic Latino families. The school is chosen based on its percentage of families requiring the free or reduced lunch program and language spoken at home. Participants are parents of sixth, seventh, and eighth grade students. Participants will initially be selected from a returned sample survey distributed in the school information packet sent home at the beginning of the school year. After being code matched based on their perceived diffusion adoption rate from the sample survey, participants are randomly placed into a control or treatment group using a stratified system to get a well-rounded mixture of the different adoption rates of technology (Dearing, 2009) . A maximum treatment group of 30 participants will be chosen due to the size limitations of the facility to be used for the parent workshops and to account for any parents ceasing to participate due to unforeseen circumstances.

Materials & Instruments

Sample Survey. A self-created sample survey will be included in the initial school information packet given to students at the beginning of the school year. The survey will be used to gather

attributes such as gender, age, ethnicity, computer(s), internet, and mobile device access. Frequency of ICT usage on a weekly basis will be gathered to establish baseline data as well as information concerning their perceptions on computer technology. Using a Likert scale participants are asked about their feelings towards using certain technologies such as a home computer, the internet, the schools ICT portal, smartphones, and tablets ranging from "Highly Interested" to "No Interest at All." The results of their levels of interest will be used to assume the participants adoption rate according to Rogers Diffusion Theory.

Computer Skills and Concepts Workshops. The treatment group participants are invited to attend weekly workshops lasting 10 weeks. The workshops will be located in the school's computer lab. Time of instruction will be determined by the most convenient according to information gathered from the initial sample survey. Whereas the actual instruction will only last an hour, the workshop will be designed to for two hours to accommodate for Latino parents lack of sense of time and indifference to punctuality (Corredor, Huffman, Jacobson, & Rositas, 1997). Unbeknownst to the participants, the first hour will allow for the social interactions of the incoming parents, and for reinforcement and discovery of the computer skills being learned. Based on the need in prior research studies, day care for younger children will be provided at the school site to limit the inconvenience and motivate parent participation. If funding allows, a monetary incentive will be provided to participants who attend 90% of the workshops. The workshop will consist of scaffolded lessons to introduce the concepts behind the structure and navigation of a computer's operating system. These concepts will be applied to using a web browser, navigating the internet, web based messaging and communication, using different file formats, and using software such as Microsoft Office. Participants will apply these skills to mobile devices and their varying user interfaces. The school's ICT portal will frequently be a

part of instruction, used for reinforcing the skills being taught, becoming better acquainted with the system, and to lower the anxiety they may have using it.

Exit Survey. Six weeks after the workshops end, a self-created exit survey will be distributed twice to the participants of the treatment and control groups. One will be mailed home and the other will be given to the participant's child attending the school. The exit survey will gather information on their frequency of using the school's ICT portal to acquire information regarding their child's academics, messaging their teachers, and acquiring school information on a weekly basis. The survey will use a Likert Scale to measure their self-efficacy of their child's academics based on their perceptions.

Operational Variables

Independent Variable: Computer Skills. The independent variable in this quantitative study is the knowledge of computer and internet concepts, including the navigational skills necessary for using a school's ICT portal in order to gain access to various academic information and functionalities. The independent variable will be manipulated through the instructional workshops provided to the treatment group. The control group will not receive any instruction.

Dependent Variable 1: Usage Frequency. The first dependent variable include is frequency of the parent's usage of the school's ICT portal to gain access to various academic information and functionalities such as progress reports, school information, messaging teachers or administrators, curriculum content, and homework assignments on a weekly basis. Frequency data will be gathered in the exit survey, and will range from zero instances per week to over ten instances per week. A Likert Scale score of 1-5 will be applied to the different frequency ranges, allowing for data analysis.

Dependent Variable 2: Self Efficacy Perceptions. The second dependent variable is parent's perception of their self-efficacy in relation to their child's academics. Data will be based on the responses to questions pertaining to their belief they can be influential in their child's academic progress. Questions will be in a Likert Scale format, ranging from "Strongly Agree" to Strongly Disagree."

Intervening Variables: Participants level of technology adoption could influence their interest in learning these new concepts and skills as well as their consistency of usage after the end of the workshops. Some individuals may also suffer from a level of anxiety when using a computer or mobile device.

Extraneous Variables: Participants may not have access to computers, mobile devices, or the internet at home. Language, whether spoken or device specific, could become a barrier among non-English speaking parents.

Data Collection, Processing, and Analysis

Based on the results of the sample survey taken at the beginning of the school year, parents are code-matched on their perceived level of technology adoption, and are randomly placed into either a stratified control or treatment group to accurately show a representation of the all different categorical levels of adoption rate. The treatment group will be exposed to school site workshops to teach the participants the computer usage concepts and skills needed to use the school's ICT portal effectively. Six weeks later, an exit survey will be given to both groups, measuring the usage rate of the school's ICT portal, the usage rate of the different functionalities in the school's ICT portal, and the perceptions of their self-efficacy in regards to their child's academics. Exit surveys will be distributed via mail and through their children with

a self-return envelope. In order to get a full representation, home visits may be necessary to account for the exit surveys. Data from both groups will be gathered and measured using an interval scale of 1-5.

Usage Frequency between Control and Treatment Groups

H1 : There is a difference in the frequency of LMS usage amongst the Low SES parents attending computer skills workshops and those who do not.

H0 : There is no significant difference in frequency of LMS usage amongst the Low SES parents attending computer skills workshops and those who do not.

Usage frequency of the school's ICT portal ranges from zero to over ten instances per week. Possible selections are given an interval rating (0 instances = 1, 1-3 instances = 2, 4-6 = 3, etc.). The means from both group's interval ratings will be t-tested to eliminate the sampling error. An alpha level of .05 will be used in the test of significance to reject or accept the null hypothesis.

Increases in Overall Usage among the Treatment Group

H1 : There is a significant increase in frequency of a school's ICT usage amongst the Low SES parents who attended computer skills workshops.

H0 : There is no significant increase in frequency of school's ICT usage amongst the Low SES parents who attended computer skills workshops.

Usage means from the exit survey of participants in the treatment group will be compared to their baseline mean results gathered from the sample survey to find whether there was a

significant increase in ICT usage. Means will be compared using a t test with an alpha level of .05 to eliminate the possibility for sampling error.

Self-Efficacy

H1 : There is a difference in Low SES parent's academic self-efficacy amongst parents who attended computer skills workshops and those who did not.

H0 : There is no difference in Low SES parent's academic self-efficacy amongst parents who attended computer skills workshops and those who did not.

Parent's self-efficacy perceptions are measured using Likert scale questions. Questions will relate to the level of confidence they have in their ability to help and positively shape their child's academics. Scores will range from 1-5, and statistical means will be determined for both groups. Means will be t-tested at an alpha level of .05 to determine a significant difference between both groups.

Assumptions, Limitations, Delimitations

By participating in the workshops to gain knowledge on mobile technology and computers, recognizing the significance of what the school's ICT functions are and the benefits to be gained, it is likely some of the participants will purchase a computer or mobile device as a result of interest in the subject. Some participants who already own such devices may discover new functionalities they are not already aware of. Limitations include workshop attendance which could be affected by not having reliable transportation, scheduling conflicts, having to relocate their household location, and by not seeing the value of the skills being taught. This

study is bound to middle and high school parents living in low socio-economic situations, as elementary school parents are statistically more involved in their child's education.

Ethical Assurances

This study is designed to respect the rights, dignity, and privacy of the participants. Participants will be informed of the nature of the study and will have the freedom to participate or decline. Names from both surveys will be kept confidential and data will be used strictly for the preparation and analysis of the study. Permission for the research study will be sought through the schools district by filing the necessary documentation.

Summary

This quantitative study uses a true experimental design to find a significant relationship between ICT usage and computer skills among low SES parents. By using a control and treatment group, the study controls for the participants general knowledge of using the school's ICT, providing significant data useful to other similar schools and districts. ICT is being established worldwide in school systems, but is it being fully utilized by its population? If a gain in computer skills and knowledge does significantly lead to an increase in ICT usage and self-efficacy, this in turn could increase parental involvement at home, which in could lead to academic gains in lower performing schools of low socioeconomic communities.

Appendix: Exit Survey Questionnaire

Name_____

The following questions relate to how many times you check the School Loop portal in a given week.

1. How often during the week do you use School Loop to check your child's grades?
   0 Times 1-3 Times 4-6 Times 7-9 Times 10+ Times
2. How often during the week do you use School Loop to check for school news?
   0 Times 1-3 Times 4-6 Times 7-9 Times 10+ Times
3. How often during the week do you use School Loop to see what homework assignments your child needs to complete?
   0 Times 1-3 Times 4-6 Times 7-9 Times 10+ Times
4. How often during the week do you use School Loop to send messages to your child's teachers?
   0 Times 1-3 Times 4-6 Times 7-9 Times 10+ Times
5. How often do use School Loop to see what assignments your child is missing?
   0 Times 1-3 Times 4-6 Times 7-9 Times 10+ Times

The following questions relate to you and your child's schooling. Please circle the best answer that relates to you.

1. I am aware of what homework assignments my child needs to complete for school.
   Strongly Agree Agree Undecided Disagree Strongly Disagree

2. I can help my child find what homework assignments they need to complete.
   Strongly Agree Agree Undecided Disagree Strongly Disagree

3. I can help my child find the answers to their homework assignments.
   Strongly Agree Agree Undecided Disagree Strongly Disagree

4. My child knows they can come to me for help on their school assignments.
   Strongly Agree Agree Undecided Disagree Strongly Disagree

5. I know how to help my child do well in school.
   Strongly Agree Agree Undecided Disagree Strongly Disagree

References

Ahn, J., (2011). Digital Divides and Social Network Sites: Which Students Participate in Social Media? *Journal of Educational Computing Research*. 45(2), 147-163.

Anderson, K. J., & Minke, K. M., (2007). Parent Involvement in Education: Toward an Understanding of Parents' Decision Making. *The Journal of Educational Research*. 100(5), 311-323.

Banaji, S., Clark. W, Hadjithoma-Garstka, C., & Selwyn, N., (2011). Providing a Platform for Parents? Exploring the Nature of Parental Engagement with School Learning Platforms. *Journal of Computer Assisted Learning*. 27, 314-323.

Barbatsis, G., Biocca, F., Fitzgerald, H. E., Jackson, L. A., Von Eye, A., & Zhao, Y., (2005). How Low-Income Children Use the Internet at Home. *Journal of Interactive Learning Research*. 16(3), 259-272.

Barron, A., Hohlfeld, T. N., & Ritzhaupt, A. B., (2010). Connecting Schools, Community, and Family with ICT: Four-Year Trends Related to School Level and SES of Public Schools in Florida. *Computers and Education*. 55, 391-405.

Bevans, K., Devine, J., Efreom, Y., & Overstreet, S., (2005). Predicting Parental Involvement in Children's Schooling Within an Economically Disadvantaged African American Sample. *Psychology in the Schools*. 42(1) 101-111.

Bowen, N. K., & Lee, J., (2006). Parent Involvement, Cultural Capital, and the Achievement Gap Among Elementary School Children. *American Educational Research Journal*. 43(2) 193-218.

Brickman, D., Oyserman, D., & Rhodes, M., (2007). School Success, Possible Selves, and Parental Involvement. *Family Relations*. 56(5), 479-489.

Cambell, S. W., (2007). A Cross Cultural Comparison of Perceptions and Uses of Mobile Telephony. *New Media & Society*. 9(2), 343-363.

Castells, M., Fernandez-Ardevol, M., Qui, J. L., Sey, A., (2004). The Mobile Communication Society: A Cross-Cultural Analysis of Available Evidence on the Social Uses of Wireless Communication Technology. *Annenberg Research Network on International Communication.* University of Southern California, Los Angeles, CA.

Cha, Y., & Ham, S., (2009). Positioning Education in the Information Society: The Transnational Diffusion of the Information and Communication Technology Curriculum. *Comparative Education Review*. 53(4), 535-557.

Closson, K., Green, C. L., Hoover-Dempsey, K. V., Sandler, H. M., Walker, J. M. T., Whetsel, D., & Wilkins. A. S. (2005). Why Do Parents Become Involved? Research Findings and Implications. *The Elementary School Journal*. 106(2), 105-130.

Cooper, C. E., & Crosnoe, R., (2007). The Engagement in Schooling of Economically

Disadvantaged Parents and Children. *Youth & Society*. 38(3) 372-391.

Crosnoe, R., (2001). Academic Orientation and Parental Involvement in Education During High School. *Sociology of Education.* 74, 210-230.

Crosnoe, R., Mistry, R., & Elder, G., (2002). Economic Disadvantage, Family Dynamics, and Adolescent Enrollment in Higher Education. *Journal of Marriage and Family.* 64, 690-702.

Daniel, C., & Hinson, J., (2001). Connecting Across Many Divides: Digital, Racial, and Socio-Economic. National Educational Computing Conference, "Building on the Future." Chicago, IL.

Davis, A., Jesse, D., & Pokorny, N., (2004). High Achieving Middle Schools for Latino Students in Poverty. *Journal of Education for Students Placed at Risk*. 9(1), 23-45.

De Corredor, Y. Q., Huffman, J. B., Jacobson, A. L., & Rositas, M. C., (1997). Parent Involvement Training with Hispanic Parents: A Report from Tomas Rivera Elementary School. A Case Study. *Center for Parent Education: University of North Texas College of Education.*

Dearing, E., Kreider, H., Simkins, S., & Weiss, H. B., (2006). Family Involvement in School and Low-Income Children's Literacy: Longitudinal Associations Between and Within Families. *Journal of Educational Psychology*. 98(4), 653-664.

Dearing, J. W., (2009). Applying Diffusion of Innovation Theory to Intervention Development.

Research on Social Work Practice. 19(5) 503-518

Du, J., & Huang, G. G., (2002). Computer Use at Home and at School: Does it Relate to Academic Performance? *Journal of Women and Minorities in Science and Engineering*. 8, 201-217.

Gaetano, Y., (2007). The Role of Culture in Engaging Latino Parents' Involvement in School. *Urban Education*. 42(2) 145-162.

Goldberg, W. A., & Tan, E. T., (2009). Parental School Involvement in Relation to Children's Grades and Adaptation at School. *Journal of Applied Developmental Psychology*. 30, 442-453.

Goulet, L. S., Hampton, K. N., & Livio, O., (2010). The Social Life of Wireless Urban Spaces: Internet Use, Social Networks, and the Public Realm. *Journal of Communication*. 60, 702-722.

Green, C. L., Hoover-Dempsey, K. V., Walker, J. M. T., & Sandler, H. M., (2007). Parent's Motivations for Involvement in Children's Education: An Empiraical Test of a Theoretical Model of Parental Involvement. *Journal of Educational Research*. 99(3), 532-544.

Green, T., Lim, H., & Ortiz, R. W., (2011). Families and Home Computer Use: Exploring Parent

Perceptions of the Importance of Current Technology. *Urban Education*. 46(2), 202-215.

Henderson, R., & Honan, E., (2008). Digital Literacies in two low socioeconomic classrooms: Snapshots of Practice. *English Teaching: Practice and Critique*. 7(2) 85-98.

Heo, H., Kang, M., & Kim, M., (2011). The Impact of ICT use on New Millennium Learners' Educational Performance. *Interactive Technology and Smart Education*. 8(1), 18-27.

Ingram, M., Lieberman., J. M., & Wolfe, R. B., (2007). The Role of Parents in High-Achieving Schools Serving Low-Income, At-Risk Populations. *Education and Urban Society*. 39(4). 479-497.

Jannsen, J. B., Martland, N., & Rothbaum, F., (2008). Parents' Reliance on the Web to Find Information About Children and Families; Socio-economic Differences in Use, Skills and Satisfaction. *Journal of Applied Development Psychology*. 29, 118-128.

Julka, A., Parks, D., Stehr, G., & Trechter, D., (2010). Student Use of Communication Technologies – Parent/Guardian Survey Report. Survey Research Center Report. University of Wisconsin-River Falls.

Knobel, M., Stone, L., & Warschauer, M., (2004). Technology and Equity in Schooling: Deconstructing the Digital Divide. *Educational Policy*. 18(4), 562-588.

Lewin, C., & Luckin, R., (2010). Technology to Support Parental Engagement in Elementary

Education: Lessons Learned From the UK. *Computers & Education*. 54, 749-758.

Matuchniak, T., & Warschauer, M., (2010). New Technology and Digital Worlds; Analyzing Evidence of Equity in Access, Use, and Outcomes. *Review of Research in Education*. 34, 179-225.

Male, G., & Pattinson, C., (2011). Enhancing the Quality of E-Learning through Mobile Technology: A Socio-Cultural and Technology Perspective Towards Quality E-Learning Applications. *Campus-Wide Information Systems*. 28(5), 331-344.

Metros, S. E., & Sun, J. C., (2011). The Digital Divide and Its Impact on Academic Performance. *US-China Education Review*. A(2), 153-161.

Milne, A., & Plourde, L. A., (2006). Factors of a Low-SES Household: What Aids Academic Achievement? *Journal of Instructional Psychology*. 33(3) 183-193.

Pinto, S., & Telem, M., (2004). Information Technology's Impact on School-Parents and Parent-Student Interrelations: A Case Study. *Computers and Education*. 47, 260-279.

Reid, D. J., & Reid, F. J. M., (2007). Text or Talk? Social Anxiety, Loneliness, and Divergent Preferences for Cell Phone Use. *CyberPsychology & Behavior*. 10(3), 424-433.

Sahin, I., (2006). Detailed Review of Rogers' Diffusion of Innovations Theory and Educational Technology-Related Studies Based on Rogers Theory. *The Turkish Online Journal of*

Educational Technology. 5(2), Article 3.