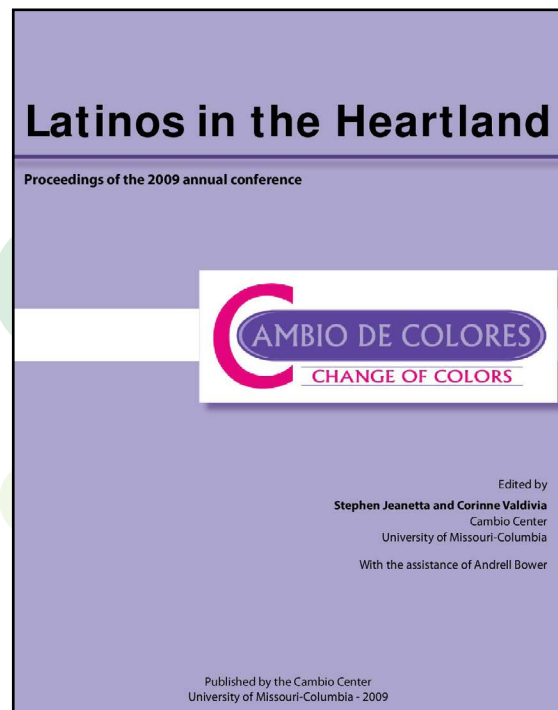# Reading, Writing, and Technology: Preliminary Results from a Bilingual Reading and Computer Literacy Program in Lincoln, Neb.

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Abstract

Latino students' academic performance has long been a concern for schools across the nation. In 2008, the Latino high school graduation rate in Lincoln, Neb., was 55.7 percent compared with an Anglo graduation rate of 81.7 percent (Lincoln Public Schools 2008). Spanish-speaking Latino students in particular are prone to dropping out, experiencing little-to-no academic achievement and scoring significantly lower on standardized test scores in all subjects than their English speaking counterparts (Lopez, et al, 2007).

Although there exists numerous remedial programs that seek to address this alarming trend among students in high school, educational research indicates that the most effective strategies for addressing poor high school performance and high school incompletion begin in the preschool and elementary school years (Balfanz, et al, 2007; Lehr, et al, 2004).

Some common antecedents to poor academic performance in high school and high school incompletion can be traced back to elementary school and include: limited family resources, inadequate early literacy experiences and inconsistent elementary and middle-school attendance (Lopez, et al, 2007). Interestingly, early literacy experiences appear to affect all of the other content areas in school, including math and science (Shaw, et al, 2001; Lopez, et al, 2007).

Recent educational research with low-income, ethnic minority, at-risk students indicates that parental involvement in elementary school and supportive parent and child relationships in middle and high school are strong predictors of unexpected graduation of at-risk students from high school (Englund, et al, 2008). In light of this research, El Centro de las Américas, a nonprofit community center serving the needs of Latinos in Lincoln, has piloted a family literacy program that integrates reading and computer literacy. In this age of digitalized education, parents who have no understanding of basic computer skills are at a significant disadvantage when trying to encourage academic involvement and achievement in their children (Duran, et al, 2001). This is due partly to their children's extensive exposure to, and use of, technology in school. By integrating bilingual reading activities with computer instruction, the program enhances literacy levels in Spanish-speaking immigrant families and success among Latino students.

El Centro's literacy program centers not only on the student but also on the entire family. In an attempt to encourage parent participation in the student's education, the program seeks to fuse the cultural importance of family in the Latino community with an increased emphasis on academic achievement. El Centro's program uses a combination of informal discussion groups with the parents, a bilingual reading liaison and instruction in basic computer skills in the school's computer lab. The reading discussion groups serve to infuse the parents with the concept that their children's education is a family activity that necessitates participation from all, while the computer instruction provides them with an essential tool for enhancing academic success. Students participate in bilingual reading clubs with a bilingual reading specialist to work on oral and written fluency. They also recieve a new book to read at home each week. Preliminary results indicate increased literacy behaviors at home and at school.

Keywords: Latino education inequalities, dropout rates, Latino literacy programs

vacuum of accurate information […]" (Institute for Public Policy, 2007, p. 6). Hundreds of migrants live temporarily in Lafayette county, and some immigrants and Latinos live there permanently. For the sake and well-being of the whole community, the newspaper and other power brokers would do well to consider what language they use to portray people and strive for a more balanced representation.

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▶ Reading, Writing, and Technology: Preliminary Results from a Bilingual Reading and Computer Literacy Program in Lincoln, Neb.

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Introduction

The issue of Latino education has become an increasing concern in recent years. Although their numbers in the public school system have grown exponentially, their achievement scores have not. Many programs have attempted to address the below-average academic performance among Latino students. This paper examines one such program: a family literacy program implemented by El Centro de las Américas (El Centro), a Latino community center, in coordination with staff from the Reading Center at the University of Nebraska-Lincoln. The program's aims were to promote family literacy in Hispanic families by combining a common component of the Latino culture, family focus, with an emphasis on an increased parental role in the child's education. Strategies used were informal reading discussion groups with a bilingual liaison and a basic computer skills class. Children in the families were interviewed over the course of the program to assess their reading abilities and retention and detect improvements.

Latino Students' Academic Achievement

In 2008, the Latino high-school graduation rate in Lincoln was 55.7 percent, compared with an Anglo graduation rate of 81.7 percent (Lincoln Public Schools, 2008). Spanish-speaking Latino students in particular are more prone to dropping out and scoring significantly lower on standardized test scores in all subjects than their English-speaking counterparts (Lopez, Gallimore, Garnier, & Reese, 2007). These statistics are compounded by the fact that an increasing percentage of the students in elementary schools are from Latino families. During the past 20 years, the national Latino school-age population has grown 150 percent, and today, one in five elementary school students is Latino (National Center for Education Statistics, 2008).

Family Literacy

Educational research indicates that the most effective strategies for addressing poor high-school performance and high-school incompletion begin in the pre-school and elementary school years (Balfanz, Herzog, & MacIver, 2007; Lehr, Sinclair, & Christenson, 2004). Some common antecedents to poor academic performance in high school can be traced back to elementary school and include inadequate early literacy experiences (Lopez, et al, 2007). Interestingly, early literacy experiences appear to affect all of the other content areas in school, including math and science (Shaw, Nelsen, & Shen, 2001; Lopez, et

al, 2007). Recent educational research with ethnic minority students indicates that parental involvement in elementary school and supportive parent-child relationships in middle and high school are strong predictors of unexpected graduation of at-risk students from high-school (Englund, Egeland, & Collins, 2008).

Several issues specific to the Latino population complicate the situation. Many Latino parents come from cultures in which parent's expected role in the educational system is different than that of a parent in the United States (Illinois State Board of Education, 2003). Language barriers also inhibit many parents from actively participating in school organizations or reaching out to school officials and counselors (Smith-Adcock, et al, 2006). Teachers often see parents who don't attend as uncaring or disinterested when, in actuality, the parent is simply uninformed about the event (Jones & Velez, 1997; Pardini, 1995).

Parental Technology Use

The expanding role of the computer and technology in modern education make basic computer skills a must for students and parents alike. Academic computer use has been associated with increased reading attention in children, and parents with basic computer knowledge are more likely to promote their use for academic activities to their children (Calvert, Rideout, Woolard, Barr, & Strouse, 2005). Parents who have no understanding of basic computer skills are at a disadvantage when trying to encourage academic achievement in their children (Duran, et al, 2001). Unfortunately, Latinos are the ethnic group least likely to have those skills or to have a computer in the home (Calvert, et al, 2005). Research has indicated that parent's behavior toward computers is a strong predictor of children's academic computer use (Simpkins, Davis-Kean, & Eccles, 2005).

Program Implementation

In light of this research, El Centro de las Américas piloted a family literacy program that integrates reading and computer literacy. The literacy program centers not solely on the student but on the entire familial unit. In an attempt to encourage parent's participation in their children's education, the program seeks to fuse the cultural importance of family in the Latino community with an increased emphasis on academic achievement. By encouraging parents to take an active role in their children's academic endeavors at an early stage in their education, the program intends to foment a more cohesive partnership between parent, child and school in academics as well as technology. El Centro's program uses a combination of informal discussion groups with the parents and a bilingual reading liaison as well as instruction in basic computer skills in the school's computer lab. Parents receive instruction on the same desktop applications and uses for the Internet that their children receive at the school. In the process, they can see how computer skills serve as an essential tool for enhancing academic success.

The first component of the program is the literacy component. This consists of an informal reading discussion group that serves to reinforce the concept that education is a family activity. The program encourages family reading time and engages both parent and child in the learning process. Parents and students also participate in bilingual reading clubs with a bilingual reading specialist on oral and written fluency to facilitate reading in the home. They are also provided with a new book to read at home each week.

The second component involves a basic computer skills class administered to the parents that serves two functions. First, it provides parents with a basic knowledge of computer use that enhances the probability that they will use the computer to access academic resources to assist their children. Secondly, although computer use is all but a necessity in today's world, Latinos are the least likely to have a computer or computer skills. The computer literacy class serves to introduce the parents to computers and expand their knowledge and experience in computer usage, thereby creating an avenue that would

otherwise not exist for them to relate to their children who receive computer instruction at school.

Participants

Ninety percent of the parent participants in El Centro's literacy program are from Mexico, and the rest originating from Guatemala. The average parent about 34 years old and has been in the United States for an average of three and one-half years. Each participating family has about three children. The average age of the children is 6 years old, and 58 percent are girls. The average total income of the families is $20,800, which places them at about 95 percent of the national poverty line ($21,834) for a family of four (U.S. Census Bureau, 2008). The education level of the parents varies from three to nine years, with an average of seven and one-half years spent in the classroom. None of the participants completed a high school education in their native country, and none have finished their education since coming to the United States. However, every parent expressed a strong desire that their children successfully complete high school.

Program Evaluation

Evaluation of the family literacy program is carried out on two levels. First, a series of surveys are administered to the parents. After each session, parents complete written surveys in which they are asked to report aspects of the program that they enjoyed, lessons they learned, and ways they will implement what they have learned with their children. Parents who receive basic computer classes are continuously tested by the instructor for their retention of concepts learned in class, such as word processing and Internet functions such as search engines and email. They are assessed on their ability to perform functions similar to those their children will need to complete as part of their education, for example searching the Internet for information for a research paper and using email to communicate and send attachments. Additionally, parents from both groups are asked each week to self-report any behavioral changes they make regarding reading together at home with their children.

The second level of evaluation is carried out with the children. A reading specialist reads individually to the children and then interviews them to determine their level of interest, understanding and retention of what they read. After reading segments of a book to a child, the specialist requests that the child retell the story and uses Morrow's 10 Point Retelling scale to determine their level of listening comprehension. Additionally, the children are asked to observe any changes in their parents' behavior with respect to reading at home and parental interest in their education.

Results

Evaluation of the family literacy program is far from complete, although initial results show definite promise. The program is only in its first year of implementation, and data collection is ongoing. However, results to date indicate an increased inclination among the parents to read to their children in the home. The majority of the parents note the importance of literacy and attest that they intend to dedicate additional time toward reading each week. Several parents have expressed not only the desire to read more to the children but also to be more dynamic while they're reading. Parents noted that they had started to make up stories when given books that contained pictures with no words. Additionally, they asked their children to make up fanciful narratives to accompany the pictures to more fully engage them in the activity. All parents expressed appreciation for the new book to read with their child each week, and a majority of them reported reading more often to their children. Children in the program observed in their interviews that their parents did, in fact, read to them more often at home. In several instances, the children noted that their parents read to them from the new books they received as part of the project. The reading specialist detected preliminary improvements in the children's interest in reading as well as increased retention of content.

With respect to the computer literacy component, the parents quickly overcame their initial trepidation with the machines and showed increasing confidence in operating the mouse and keyboard. All parents improved their typing skills and passed the individual test administered by the instructor to determine their ability to create, open, edit and save a word processing document. Furthermore, all parents accurately explained the process of an Internet search, and ways to use the information obtained in a document. The also passed all tests on email communication.

Discussion and Recommendations

As educators across the nation seek to improve the academic outcomes Latino students, innovative approaches become more important. The issues surrounding Latifno students' educational underachievement take on added value when one considers how the Latino school population is predicted to continue rising in the near future.

The family literacy program focuses on a central component to a solid education: literacy. The program has shown promising preliminary results in combining the Latino cultural norm of family with guidance for improved reading techniques and a greater parental role in education. The parents who receive the computer skills class have demonstrated increased comprehension of basic functions and topics related to the computer. Still, more needs to be done to determine whether increases in family reading time in the participant families, as well as improved computer efficiency in the parents, translate into improvements in the children's academic performance.

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▶ Finding and supporting Waldo: Report on a Demonstrative Project

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Recruitment Strategies

First strategy: know your audience

We make reference to Hispanics or Latinos as a group because they have some strong common traits among them. However, Latinos are a heterogeneous group of individuals whose countries of origin, migration patterns, socioeconomic profiles and physical characteristics differ. Culture and its values, customs and ethnicity shape how we view the world, handle problems and relate to each other.

Working with Latino families requires an understanding of different worldviews that impact how individuals communicate with professionals and how they set goals. For those who are raised in more than one culture, it is necessary to resolve conflicts arising from differences between cultures (Greenfield, Keller, Fuligni, & Maynard, 2003; Trumbull, Rothstein-Fisch, Greenfield & Quiroz, 2001). An understanding of some of the common characteristics and values of the Latino population has helped us to better identify with and serve our audience.

One of the most important characteristics of the Latino population is maintenance of the Spanish language. Recent research indicates the possibility for sustained bilingualism to be higher for Latinos than for other high immigration groups such as Asians. According to the 2002 National Survey of Latinos, 24 percent of first-generation, 47 percent of second-generation and 22 percent of third- and later-generation Latinos are bilingual (Lutz 2006). It is evident, then, that Latinos have a strong desire to maintain the Spanish language while increasing their proficiency in English. Based on this, the program is offered in Spanish, and we have culturally tailored and translated the materials.

Research shows that many Latinos have a collective worldview and a strong identification and attachment to nuclear and extended family. Loyalty, reciprocity and solidarity among members of the family are considered to be some of the most important cultural values. Research shows us that the concept of familismo and the significance placed on the family involves an obligation of the family to share responsibility in rearing children, to provide financial and emotional support and to make decisions about issues that affect the family. The value of familismo has remained strong even across generations and regardless of time lived in the United States (Marin and Marin 1991; Delgadillo 2003; Rivera, Arredondo & Gallardo 2002; Viramontez, Anguiano & Kawamoto, 2003). Understanding this strong cultural worth has helped us to select appropriate activities sensitive to the importance of the family