

Learning at the Border: How Young People in Informal Settings Use New Media for Community Action and Personal Growth

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"Learning at the border" has two meanings here. First, it refers to learning—the formal or informal practices of altering participant knowledge and selfhood—that occurs in border settings that exist between the highly-structured realm of schools and the more diffuse realms of life in neighborhoods and on the streets. These settings include after-school programs, boys and girls clubs, libraries, museums, and community centers. The second meaning of "learning at the border" comes from the lived existence of program participants on the borders of society; marginalized because of their language, cultural background, race, or social class, they are denied full participation in the public sphere. "Learning at the border" refers to the learning done by participants and others associated with them and/or these programs, as all involved may learn from each other at or over social borders.

This paper describes two of a set of connected programs in which university students and faculty work with community members to create border-bridging spaces in which young people have fun, learn about new technologies, and develop academic potential through self-expression and self understanding. A common thread is the goal of enabling young people to become active creators and sustainers of their own communities who cross borders via social entrepreneurship. In this way, young people learn how to use ICTs to promote community building. As such, they become junior community informatics researchers themselves.

The variety of projects by young people in these settings is diverse. We will discuss the complexity and challenges for enabling community participation in these projects, and the insights we have gained from looking across multiple sites.

Keywords: learning, border, youth, institutions, partnerships.

INTRODUCTION

This paper presents findings from the study of two innovative community informatics (CI) action research projects that unite community members with university researchers and information professionals in urban neighborhoods in central Illinois in the United States. This CI work is grounded in the philosophy of the American Pragmatists, which rose to prominence at the end of the 19th Century (Menand, 2001) and introduced the theory and practice of community inquiry into a range of fields, including aesthetics, education, social work, law and public citizenship. Relying heavily on the work of John Dewey (1956, 1966), community inquiry is based on the premise that if individuals are to understand and create solutions for problems in complex systems—in other words, if they are not only to obtain new knowledge but understand how to put it to advantageous use—they need opportunities to engage with challenging problems, to learn through participative investigations, to have supportive, situated experiences, to articulate their ideas to others, and to make use of a variety of resources in multiple media.

Dewey argues that this learning, to be most effective, cannot divorce the intellectual from the experiential, because education divorced from experience creates passive learners who do not know how to put information into practice and also creates/maintains a social underclass (1956). Incorporating lived experience in education has been emphasized by many scholars in different fields. They all value alternative ways of knowing in the everyday worlds of learners, believing that the child's entire social context is important as a source of learning (Aikenhead, 1996; Cobern & Aikenhead, 1998; Horton & Freire, 1990; Maddock, 1981; Phelan, Davidson, & Cao, 1991; Pomeroy,

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1994). Thus, education must be relevant to the experiences of real life in order to engage the whole person and to allow the development of the citizenry and the society to their full potential.

Full development, in this day and age, must include facility with and access to information and information tools available in digital form. A gap in facility with and access to these resources, known as the the “digital divide,” exists on educational, economic and social levels due to differences in motivational, material, skills, and usage access to informational technology (van Dijk, 2005a, p. 7). In the long run, differences in access this can cause a “narrower base for economical growth, innovation and competition” or “unequal participation in . . . politics, education, culture, social relationships and communities” (2005a, p. 7). There are observable “growing gaps of access between people with high and low income or education and majority ethnicities as compared to minority ethnicities” (van Dijk, 2005b). The CI projects described in this paper attempt to bridge the digital divide for certain groups of marginalized youth. The decisions regarding how we go about bridging that gap are a source of complexity in these projects, as they present different obstacles to and opportunities for sharing power in ways that allow individuals to cross traditional community borders.

The concept of border crossing not only critiques borders that confine the experience of learners and limit the educational practices of crossing diverse geographical, social, cultural, and economic borders; it also calls for new ways to forge a educational pedagogy capable of connecting the institution and the community, the students and teachers, men and women, the poor and the rich. Border learning can be identified by three characteristics: an informal or less-formal setting, marginalized participants, and participatory action.

The learning that takes place in the programs described in this paper occurs in border settings—informal or less-formal settings that exist between the highly-structured realm of schools and the more diffuse realms of life in neighborhoods and on the streets. Border settings include such locations as after-school programs, boys and girls clubs, libraries, museums, and community centers. In our projects, which are both after-school programs, learning across the border emphasizes learning from others over the border. Such learning can occur when adults and children work together as partners; schools work with clubs, libraries with residents and their children; and college students with faculty work for the youth on the streets. Wherever and whenever individuals and groups extend their trust and make their resources available across traditional boundaries to achieve common goals, border learning occurs.

Second, border learning can be characterized as engaging otherwise marginalized participants. Programs supporting border crossing seek to serve groups or individuals relegated by mainstream society to a fringe or border existence because of their language, cultural background, race, age, or social class. Border settings are sites at which marginalized people can build on their own strengths by sharing what they know and by learning from others, outside the repressive controls of more formal settings.

Finally, participatory action opens doors for border crossing learning—it might be argued that border learning is implicit in participatory action (see Greenwood & Levin, 1998; Reardon, 1998; Whitmore, 1998). Border Crossings (Giroux, 2005) points to the need for academics, teachers, social workers and others to address the crossing of borders not only for learning new skills and a body of disciplinary knowledge but also culminating the knowledge in a set of recommendations that are then implemented through action. Border learners often will have powerful opportunities to engage in problem-solving by gaining knowledge of the specific context of their learning activity and community challenges, rather than only to draw upon generalized or abstract knowledge such as might come from a textbook. Because this approach emphasizes the development of reflective practice, students learning at borders will learn critical consciousness of society which allows them to engage more for social problems and actions.

In order to cross boundaries, teachers and mentors should incorporate students’ lived experience into teaching and learning. As Dewey suggests, real education takes place when learners are motivated by their own life experiences and given opportunities to learn from the world beyond their experiences. All students have developed ways of understanding the natural world based on personal experiences and environments (Driver, Asoko, Leach, Mortimer, & Scott, 1994; O’Loughlin, 1992). For students from diverse backgrounds, learning is enhanced—indeed, made possible—when it occurs in contexts that are linguistically and culturally meaningful and relevant to them (Lee, 2003). The participation of parents and community members (Moll et al., 1992; Hammond, 2001) is valuable in incorporating students’ linguistic and cultural experiences into teaching and, in turn, making knowledge relevant and meaningful to students’ everyday lives. Families’ knowledge and skills in areas ranging from plant cultivation to cooking, art, math, entrepreneurship, and religion could lead to classroom activities with a number of important benefits: increased literacy, new instructional routines, and more positive perceptions of parents and the community. On the other hand, new knowledge for real understanding involves prior knowledge and new personal experiences (Driver et al., 1994). Hence, combining the new and the familiar in a learning context immediately relatable to everyday life is critical to student learning.

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This paper describes two CI projects designed to facilitate border learning. These projects are connected in purpose, in the use of technology in education, and in the professional and educational relationships of stakeholders. In these projects, university and community partners together create spaces to enjoy and learn new skills and knowledge; technologies help students achieve academic goals, develop careers, and find their potential through self-expression; and young people document and reflect on their own experiences and/or communities, many of them becoming junior CI researchers. This paper will detail the purposes and describe the complexity of the projects, as well as draw out the principles that have been observed across learning sites.

4-H TECHNOLOGY ENTREPRENEURSHIP AT URBANA MIDDLE SCHOOL

In this collaborative program, offered by the Urbana Middle School (UMS), the University of Illinois Extension, and the Graduate School of Library and Information Science at the University of Illinois at Urbana-Champaign (GSLIS at UIUC), young people developed audiovisual podcasts on topics of their choice over the course of a school semester. From February to May, 2007, a small group of sixth, seventh, and eighth graders from Mexican and Mexican-American families met with three adults each week in their school's computer lab and a nearby classroom for 1.5 hours, as well as three Saturday sessions—for which transportation was provided—on campus at UIUC. The students completed post-program surveys and interviews. In some cases, parents were also interviewed.

The majority of middle school students involved in this program are considered low-income and either immigrated to the United States or have parents who immigrated to the United States from Mexico. The students vary in terms of academic achievement. The majority of students had minimal to zero knowledge of the computer programs utilized over the course of the program at the start.

Purposes of the UMS Podcast Program

The idea to offer a program specifically targeting Latino/a youth at the Urbana Middle School (UMS) came after an identified need. In a conversation with Karyn Mendoza, the University of Illinois Extension Youth Development Educator, the Latino/a Family Liaison at UMS expressed concern over the low participation of her school's Latino students in after-school programs and the lack of culturally sensitive delivery, specifically bilingual delivery in English and Spanish. Karyn Mendoza identified technology as a way to engage youth in participation and committed to establish a program to do so. This program, therefore, was created specifically to bridge an informational and social gap that was visible through a lens of ethnicity/race. In his discussion of the digital divide, van Dijk asserts that ethnicity itself does not create a barrier in accessing informational technology; there are no anti-technology genes inherent in any part of the human family. However, there are cultural and psychological factors that shape access; hence, "increasing surplus value of information and communication technologies" (2005a, p. 207) can improve motivational access. For example, offering information and ICT training in the individual's home language, as was suggested by the UMS liaison, may give students reason to feel the new technologies can belong to them.

Information and training that also incorporate the opportunity for creative work on the part of the individual learner may be especially powerful determiners of access. Lazarus and Mora (2000, p. 5) report that minority children in the United States want to find information on the Internet in their own language but, more than that, they want to participate in creative projects. These children see the Internet mainly as a means of entertainment. Online information presented as a consultation and sourcing tool for creative work driven by personal curiosity and imagination may foster the learner's determination to master the usage skills of online information.

This melding of creativity, curiosity, and imagination with education is perceptively described in David Hawkins' "Messing About in Science" (1974; originally published in 1965), which describes his work in a fifth-grade class teaching about pendulums as part of the Elementary Science Study. (Although the study was grounded in a specific setting, the ideas might be applied to any subject of study or types of learners, including learning about and with digital technologies.) Hawkins identifies three patterns, or phases, of school work in science. These phases induce different relations among children, materials of study, and teachers. The essence of the phases is that the form of inquiry in science is not that different from the form of inquiry in learning.

Hawkins discovered that in order to learn in science we need ample time to "mess about." Thus, he devotes most of his article to the circle (O) or "messing about" phase, in which learners engage in "free and unguided exploratory work" (p. 67). In the pendulum study, Hawkins had planned to allow the children to explore for an hour or two, before getting into the science lesson per se. But he soon discovered that they needed more time to become familiar

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with the materials. Moreover, the materials provided a structure to their investigations. Their messing about was far from chaotic or undirected. In fact, as they messed about they began to generate the very questions that the lesson was intended to address, but in a way that was more involved, and connected to their direct experience. Hawkins goes on to describe two additional phases, which he sees as essential, but more often included in science teaching. The triangle (Δ) phase, involves “multiply programmed material” to support work that is “more externally guided and disciplined” (p. 72). The square (\square) phase is for “discussion, argument, and the full colloquium of children and teacher” (p. 74). The phases are unordered, and all are important. Learning in science requires the opportunity to experience all of the phases in a connected way, and to move easily among them.

Franz and Papert (1988) build on Hawkins’s ideas in a paper about students learning how to measure time. They argue that using computers well for learning requires

open-ended projects that foster students’ involvement with a variety of materials; . . . activities in which students use computers to solve real problems; . . . [connection of] the work done on the computer with what goes on during the rest of the school day, and also with the students’ interests outside of school; . . . [recognizing] the unique qualities of computers; . . . [taking advantage of] low-cost technological advances . . . , which promote integration of the computer with aspects of the students’ physical environment.

In the UMS project, young people use technologies to compose and publish stories important in their lives. Their work (learning) appears to follow the models we see in the pendulum and time projects, especially in terms of the value of messing about. They need time to explore, experiment, and become comfortable with the technologies. For example, these young people create original podcasts by selecting images from the web, scanning family photos, creating graphics, finding and downloading music, creating audio files, editing audio using Audacity, and creating presentations. They learn about copyright and citing sources, as well as about design and story-telling. More importantly, they use the podcasts as a way to connect with and talk about their families and their lives outside of school.

Podcasting was chosen for the final product of this program because it is an emerging media that lends itself well to application in formal and informal educational settings with youth in the United States who speak English as a second language. As Niesyto, Buckingham, and FisherKeller (2003) observed, “auditory and audiovisual media increasingly offer young people opportunities to communicate their ideas and feelings using nonverbal and nonprint forms” (pp. 461–462). Making podcasts in the UMS after-school program offers these young people an accessible means by which to have fun, to learn to use new technologies, and to produce an original work of communicative art. Further border-crossing goals of this podcast project are to develop in the students and adult staff a more socially-engaged intelligence and a critical understanding of information, communication, and technology, to encourage self exploration with regard to culture and identity, and to introduce participants to new and emerging technology as a means of self-expression, empowerment, and social change. The project aims to accomplish these goals through a curriculum that includes instruction in: planning and production via storyboarding; the use of PowerPoint, Audacity, and iMovie for image and sound combination and manipulation; the power of storytelling through symbols; critical media and information literacy; and Internet safety and respect for others’ intellectual property.

Using technology as a means of communication, we encourage the students to find their voices to representing themselves as active learners and cultural producers. English and Spanish language use are both welcome in the program, and three of the four project teachers/mentors speak or understand both languages, while the fourth is also bilingual. During this first semester, teachers/mentors showed the students how Latino and Hispanic artists have expressed themselves through their art, and how cultural artifacts can be used as symbols to communicate ideas. Incorporating Hispanic-related educational resources into the curriculum successfully fostered the teacher-student relationship and developed the students’ cultural awareness. The students participated in rich discussion while viewing these works of art and began incorporating visual and audio symbols of their ethnic heritage in their podcasts. The majority of the students chose to narrate their podcasts in both English and Spanish.

Like Hawkins, we see the value of guided inquiry (Δ) and of full colloquium (\square) in this work, but we have seen increasingly the need for ample time to mess about (O) as well. Doing that allows students to make the technology part of their lived experience and not something divorced from it.

Complexity within the UMS Podcast Program

The time slot for this project was provided by an established after-school program at a local middle school, which facilitated student recruitment and parental permission to participate, but which also limited the time available in the lab to less than 45 minutes per week, with 45 additional minutes per week in a classroom without computer

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access. To work around the time limits, the teacher/mentors arranged for three Saturday sessions in a computer lab on campus. As the middle school computers were all Macs and the University lab computers were all PCs, this resulted in some frustration with hardware and software incompatibility and some delay in student project development. Nevertheless, the necessity for these workarounds did provide students and teachers/mentors with exposure to both types of readily available computers and informed them as to some of the complexities of computer use.

Working on both PC and Mac computers caused multiple problems with file transfer and software incompatibility. As our projects progressed, the students' working files became too big to store on Flash drives. We suggest purchasing Flash drive with at least one gigabyte of storage for students' files. Teaching students how to save their digital files properly should be included in the curriculum; many times, due to the pressure from other teachers to exit the lab, our students were unable to take the time to save their files themselves. If students are able share the responsibility of storing their digital files, teachers could reduce the time required to exit the lab. We suggest also that teachers consult with technical support staff about the software compatibility and equipment accessibility as part of curriculum planning, as varying versions of programs and a basic functional incompatibility between PC and Mac computers was a source of serious trouble while finalizing the podcast files.

On a positive note, staff from UMS were vital to the program's success. The schools' Latina/o Family Liason and Spanish teacher assisted in recruitment efforts and attended sessions as needed. Due to the nature of the program, including the fact that the majority of participants had minimal experience with computers prior to attending the program, the number of staff was key. Youth were more likely to get more one-on-one attention because of the number of committed teachers/mentors. Also, the fact that the program was Latino-friendly may also have contributed to its positive impact among the youth; three of the eight participants were discovered to have skipped classes for which they were formally registered in order to participate regularly in our program. Locating the program as an after-school offering, endorsed and supported by the public school and offered on the school campus, was mentioned as a major plus by several parents in exit interviews; a lack of reliable information about the program, as well as transportation barriers and parents' time commitments, would otherwise have prevented their children from participating. The fact that informative, Spanish-language flyers about the program were sent home via school packets on a regular basis helped the parents remain informed of and active in their children's education. The program staff's willingness to work around occasional variations in students' schedules was also appreciated by parents (personal communications, June 18, 2007).

The created podcasts themselves were a source of great pride and pleasure for the students, their family and friends, and for the program and school staff. The students were encouraged to choose their own topics based on their personal interests; seven students created podcasts describing themselves, their families and friends, their likes and dislikes, and their cultural/national heritage, while the eighth developed an informational presentation on Roman numerals, complete with quiz questions for the audience. At the end of the semester, the students had developed confidence and pride in their work, which they manifested by personally introducing their podcasts to a large group audience of family and friends.

Several other benefits have also been noted. During the program, whenever technological difficulties stymied the teachers/mentors, the youth participants were always eager to help find solutions and were often as successful or more so than the adult staff. These youth offered their assistance with quiet pride; one of their UMS teachers noted that these students spoke to other UMS students of the adult program staff as "their friends from the university." A later technology-oriented program offered at this school was filled to capacity within only a few days; the same UMS teacher noted that those of her students who had participated in the program this last semester talked incessantly among their peers about their experience in the podcast program, which could have contributed to the rapid filling of available slots in the new program (L. Rivera, personal communication, May 15, 2007). One mother of a student involved in the original program reported to our staff that, since the close of the semester, her daughter has used their home computer with great pleasure and expanded comfort, and has used PowerPoint (which she did not previously know how to use) to make and print out a colorful birthday card for her grandmother. This mother was especially appreciative of the fact that education about online safety was included in the program curriculum and shared with parents. Another of the students remarked in his exit interview that creating an audiovisual podcast was a "better" experience than was writing a paper, because the emotional and intellectual payback was more immediate (personal communications, June 18, 2007).

For the adult staff, also, the podcast program has been a rich experience in reflective education. As one staff member reports:

Working with students in the Urbana Middle School after school program was an inspiring journey for me to appreciate Hispanic culture and revisit my own cultural identity. As one of the teachers and an international student in the U.S., I

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tried to put myself in these students' shoes, imagining how difficult may be for these immigrant young people to live and study in a new country. I brought my own "away-from-home" experience into designing the sample storyboard. Through the process of curriculum design, I came to understand that I was telling my own story to these students as a self-exploration journey. Knowing nothing in Spanish was my initial worry working in this project, but it turned out that the students and I were interchangeably engaging multiple forms of communication, including visual, gesture, and verbal modes. (C. Lin, personal communication, June 13, 2007)

The personal insight and enrichments derived by students and staff from this program thus far have made it an especially enriching foray into learning at and across borders, one that appears to hold promise for future learning along similar lines. Students and parents have repeatedly commented that the podcast project creates a new space for student self-expression and bonding with family and friends. Furthermore, though these students have requested diverse learning themes for next year, each driven by individual outside interests, many of their suggestions include mention of technology such as that used for podcasting.

THE B. T. WASHINGTON AFTERSCHOOL LIBRARY PROGRAM

The B. T. Washington Afterschool Library Program is an initiative that provides innovative learning experiences for at-risk children and their families in the public school system in Champaign, Illinois. The program combines action research and service-learning with social entrepreneurship. Our aim is to develop the sustained interdisciplinary and community-wide approach needed to achieve a significant transformation in the education of children who are not thriving under the current system: Latino immigrant and African-American students from low-income families. The B. T. Washington Afterschool Library Program began in February 2006, in direct response to a request from parents in the Shadowwood mobile home community in north Champaign, new Spanish-speaking immigrants who are struggling to create new lives with minimal incomes, cultural differences, language barriers, and a sense of social exclusion. With no available options for academic support, parents were desperately worried about the future of their children, who were falling more and more behind in school. Initiated by the Graduate School of Library and Information Science at the University of Illinois (GSLIS at UIUC), initial partners in the afterschool program were the Latino Partnership (a non-profit association of organizations who meet monthly to share information about services for local Latino families) and the B. T. Washington Elementary School (BTW), whose principal provided both enthusiastic support and physical facilities for the program. Currently, the program partners with the Don Moyers Boys and Girls Club for its general operation, and with the University of Illinois Family Resiliency Center for special projects.

Purposes of the BTW Afterschool Program

The objectives of the BTW Afterschool Library program are (1) To help at-risk children in north Champaign succeed by: enriching the curriculum to draw on the funds of knowledge in their households, creating bilingual, interdisciplinary, enjoyable, and technology-enhanced afterschool learning activities; developing a mutually respectful relationship between at-risk families and BTW; increasing parent participation in the life of the school and improving parents' ability to help their children succeed in school; and helping children at BTW develop a positive sense of identity. (2) To create a new, interdisciplinary research platform and service-learning opportunity at UIUC that is focused on social entrepreneurship in that it: offers a creative solution to a social problem; develops a new inter-institutional enterprise in which participants from all walks of life work together to move from opportunity recognition, to marshalling resources, to assessing and nurturing a growing program. (3) To extend current research on community funds of knowledge by: contributing new findings from a multicultural perspective; trying out new methods in the form of storytelling and the use of digital technologies; providing a model linking school and community that others can adapt.

The program currently includes both Latino and African-American children, chosen by their teachers as those most in need of academic help; the older children who return to the program once they have graduated from BTW attend because of academic need, or for the convenience of keeping siblings together after school. The program began with about thirty students from third through fifth grade. In spring 2007, the program greatly increased in size, operating four days each week and serving about fifty students in kindergarten through seventh grade. Students are separated into four classrooms based on grade. Children also go to the school library to read or to use the eight laptops that the school allows us to set up into a temporary computer lab. Around eighty volunteers tutor one to three times a week; the goal is a one to three tutor to student ratio.

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Enrichment activities in the BTW program focus on the intersection of digital literacy, family strengths, and family stories. We noted early on that the children found reading and writing activities much more appealing if they involved using computers, such as reading jokes on a children's website or writing letters to their mothers. The 'messaging about with computers' rubric fits well with the nature of activities at BTW. We developed projects as we went along. Children learned informally and on a mostly ad hoc basis. Tutors or peers would explain how to do the projects, which were done by those children who were most interested, after regular homework was completed, or on Fridays, which were set aside for special activities. It appeared that most of the children had little to no previous computer experience. Our primary computer projects are described briefly below.

iLab Webpages: Children used the BTW website set up with the iLab content management software (<http://ilabs.inquiry.theuniversityofillinoisaturbana-champaign.edu>) to produce their own Inquiry Units (simple web forms with sections labeled Ask, Investigate, Create, Discuss, and Reflect). They created their webpages to hold material they'd found on the web on a particular topic of interest, such as wrestling or soccer, or to write a simple story or poem of one to three lines about themselves or their families. Students demonstrated a strong desire to use computers to express themselves and gather information of genuine interest. They persevered in creating their pages, even though it required painstaking effort to key in their passwords correctly and type even a few words. They wrote what they had not expressed orally ('my name is Michael and I am a good person') or had not been interested in writing with pen and paper (such as a jump rope rhyme). In conjunction with noticing the multiple layers of challenges to producing digital text, we also observed that the children enjoyed playing at computer fluency. For example, one day three girls were chatting and sitting side-by-side at the computers. They would flutter their fingers over the keys as if they were typing along at a rapid pace, frequently glancing at the screen.

Family Strengths Exhibit: We spent several Fridays at BTW reading stories that featured family members helping each other, triumphing over adversity, or simply bonding together. Afterwards, we discussed what made families strong and students created their own expressions of family strengths in pictures, poems, and stories by drawing on paper. These pages were presented at the Family Resiliency Center's open house as a public exhibit entitled "Fuerza de Familia—Family Strengths." To accompany the exhibit, several of the older children learned PowerPoint in order to create a poster for the exhibit. Some of the younger children created a simple word-processed exhibit invitation to bring home to their families. The children enjoyed participating in a computer activity even if their fingers never touched the keyboard. For example, as we all sat in the hallway at the end of one day, the children called out words describing their strengths, which a computer operator added to the PowerPoint poster.

Story Studio: At the Family Resiliency Center Open House, we designed and led a "Story Studio" open to all participants. Children and parents used construction paper, yarn and markers to produce their own story books, which they read while being filmed against a green screen. The Family Resiliency Center intern used the words and pictures in their books to create animated digital images for the backgrounds of the computerized stories. One of the BTW students produced a story about the funds of knowledge in his family. He described his own skills in drawing cars and playing soccer, as well as the strengths of his parents, including both physical skills (keeping the house clean, fixing things) and the provision of emotional support. The CD produced for each participant included all of the digital stories, plus an introduction comprised of a story produced by two other BTW students, essentially an overview of the Open House in the context of what they had done that day as volunteer helpers. In this activity, digital technology supported parent participation, which has always been difficult in the BTW project. The CD allowed parents who hadn't attended the Open House to experience it to some degree. Further, the enthusiasm of several parents who saw the CD encouraged us to develop a summer pilot program, called Community Treasures, to involve parents in digital story production with their children (see below).

BTW Student Presentation: The participation of several of the older BTW students in the Family Strengths exhibit and Open House described above led to the idea of inviting students to create a presentation about the BTW program present at several local venues. A few of the 6th/7th grade girls got together to make a PowerPoint presentation, which they delivered at both the annual meeting of the Latino Partnership and a small conference on innovative education at the University of Illinois. When it came time to make the presentations, we were surprised when several of the younger siblings and cousins of the older girls piped up and said that they would like to participate, too. The contribution they devised was to read aloud a favorite poem about girls helping their mother, to illustrate both family strengths and how we used reading aloud in a group to make literacy practices more fun in the BTW program. Here, we saw further evidence of the creativity and capabilities of our students, who did a great job preparing and delivering their presentations. Computer artifacts, like the PowerPoint presentation, were blended by the students with offline activities, like the poetry reading. We also saw further evidence of family strengths in the way the older and younger girls worked together. Further, the stories of the presentations became part of our program's lore. The PowerPoint and video of the presentations were shared with teachers, families, the tutors, and the other students in the program.

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What We Know Could Fill a Book: One important issue encountered in the BTW program was our ability to coalesce as a community, to identify and utilize effectively the funds of knowledge inherent in each tutor and student. This was important because we needed to develop a stronger sense of shared purpose, commitment and simple camaraderie, as well as find out what each person knew that could contribute to making the program run more smoothly. We also hoped that experiencing books as creators, and not just consumers, would be a valuable activity that contribute to making books overall more appealing to our students. Thus, we devised the “What We Know Could Fill a Book” project, in which both BTW students and tutors wrote a notebook page containing biographical information as well as a description of things they knew about, were good at, and could make or do. We encouraged tutors and students to interview each other. Once the pages were written, students brought them to the computer lab in the library to create digital versions, accompanied by photos taken with a digital camera. This project, in which we compelled all students to participate in, met with little enthusiasm and limited success. While the digital pages did get created and, as in the iLab webpage activity, students did enjoy writing on the computers, few tutors or students were really interested in the project generally. In this context, community-building offline may be a prerequisite for, not a result of, digital writing. Prescribed computer activities meet with deep resistance where ‘messaging about’ is too strongly replaced with demands for compliance.

Community Treasures: The Community Treasures summer project began as an addition to the BTW program that would allow us to build our relationships with students’ families and introduce digital stories as a family activity. We have met with a few families to ask them about important strengths and stories in their family, how they might like to capture these, and whom they would like to share them with. We were struck by the variety of story formats the families suggested (e.g., digital family photo gallery, home video about family gardening, digital story about a child’s visit to her hometown in Mexico), and by their strong desire to share their stories with others, both the wider family circle, and with the community at large, such as by publishing their stories in the local community newspaper. We have just begun visiting family homes to film their stories, as well as setting up Story Studio sessions at the Family Resiliency Center to capture stories better suited to that mode of production.

Complexities and Larger Issues within the BTW Afterschool Program

One unexpected benefit of the program is that teachers have noted that along with academic improvements associated with homework help, they see improved social skills and the opportunity to engage in positive interactions with adults as primary outcomes of the BTW program. Computer activities afforded social activities both within (tutors and peers helping with computer work) and beyond those associated with homework help, such as exhibit and presentations around town. These activities have also necessitated and facilitated institutional partnerships; our digital story activities have helped us find and develop new partnerships with institutions such as Family Resiliency Center.

Some challenges do arise from the lack of literacy within the school’s student population and also from the teachers’ perceptions of how learning happens. The students’ struggles with reading and writing well affects what can be done with computers in the program. Though stories and computer activities can turn children on to enjoying the development of literacy and technology proficiency, some teachers want us to spend our tutoring time on completing basic homework rather than on such “extras.”

End-of-semester tutor feedback has offered additional important insights into the benefits and challenges of this program. Volunteers commented they enjoyed the program as a break from the “usual routine of college life.” They were able to become involved in the community and leave campus to interact with children and families not involved with UIUC. Also, the program allowed future educators to observe the different strengths and weaknesses that children have in school and adapt to them, as well as to learn leadership and group management skills.

Based on their experiences, tutors suggested that the students need more time to play games and take breaks, affording more bonding time with tutors and each other and possibly facilitating student focus when it is time to do homework (teachers did comment that while better ‘time on task’ is a priority, taking a play break might help students focus on work). In addition, tutors wished for more parental involvement at meetings, but noted that computer projects seemed to provide a more congenial, fun avenue for parent involvement.

An important finding from the BTW program is that the parental involvement in student learning among Latino families is impacted by many factors which may not be obvious to outsiders. Similar to many intervention efforts that focus on the education of Latino children, one of the main goals of the after-school program has been to get the parents actively involved in the program and the school in general. Our interactions with parents whose children participate in our after-school program have made it very clear that economic hardships, language barriers, immigration issues, beliefs about the education system, as well as experiences of prejudice and discrimination are all

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substantial factors that heavily influence the amount and level of involvement that Latino parents can offer their children's schools. However, we have also witnessed that despite these barriers, many of these Latino parents value education highly and are active in ensuring that their children have access to the educational opportunities that many of them did not have.

In terms of explicit roles and outcomes associated with the program's use of computers, several tutors commented that the technology-based projects contributed to the variety of the program activities. Several tutors mentioned that the "What We Know Could Fill a Book" project should have been started earlier to allow tutors to get to better know their students at the beginning. Tutors emphasized the need for more and better communication with BTW program leaders, other tutors, and teachers, but we have yet to hit on the optimal mix of communication tools. One program leader created email lists for each day of the week and classroom, which she did not see used. Tutors did not seem to consult the program website, nor did they contribute to its blogs. She also created a Facebook group, which almost all of the tutors joined, however only a few used it (mostly to look for rides at the beginning). Several of the teachers communicated with program staff via email.

PRINCIPLES DISCERNIBLE IN AND ACROSS SITES

Technology is highly useful to support our own collaborative research as we collect and share reflections and curriculum and administration materials. Wikis are a great resource, but finding others' postings can be difficult. The BTW iLab and Moodle class sites offer volunteers, students, parents, teachers, and staff a place to exchange ideas and information.

Each community has own ethics, habits, community readiness, and facilities. The youth at BTW are, in general, not excited about technologies; the use of technology in the UMS program was a major incentive for some students but not others. Curriculum, pedagogy, and contextualization of technology use may strongly influence how youth respond to the opportunity to learn technology skills. Youth at UMS exhibit wide range of skill levels with regard to technology and language fluency/literacy, and when the curriculum and pedagogy are responsive to that variation, youth engagement and learning are enhanced. In general, parents' and teachers' willingness to trust outsiders with the safety and education of their youth depends on how well the program staff liaisons have matched their communication content and format to the values of these adult stakeholders (functional priorities, language, regularity, conciseness, etc.). Available physical facilities and the institution's legal concerns place certain limitations on activities (field trips to other sites must be formally separated from UMS activities; some schools have only Macs while other sites use only PCs).

Additionally, there are tensions in engagement with ICTs. Many BTW teachers want their student to participate only in homework help during the after-school program, not storytelling or technology play. At UMS, the students want more excitement and physical activity than is available when working on computers every week, and field trips are a huge success. The difficulty at both sites lies in finding balance between structured curriculum and fully student-driven work.

On the other hand, increased motivational, usage, skills, and material access to ICTs across community borders can and often does facilitate social entrepreneurship and enable some degree of social reform. These ICTs can fit into existing social structures, but their use simultaneously transforms these structures. There are observed preferences for and resistance to certain technologies, possibly based on sociocultural differences—responses range from "Technology destroys us" to "Technology is so welcome." For some youth and their parents, technology use functions as an intrinsic motivation to participate in border learning projects. For others, technology is primarily seen as a means to an end.

In summation, while there are difficulties inherent in the administration and ongoing design of both of these programs, they do in some measure acknowledge and foster the connection between the individual and the social by inviting the students to use their own experiences with individual and social worlds as the topics of their communication. Also, the works of communication themselves are an attempt at a sensory/informational connection between individuals and larger social groups. The process of creating these works encourages the students to consider the nature of their interests, their strengths, their loyalties, and their social networks, providing them with material, cause, and direction in the development of a critical consciousness of their social heritage and current and future social roles.

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