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Youth literacy and employment opportunities through self-assessment
Technical research report on *Learning Connections*[1]

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As has been widely proclaimed by the Obama administration, America's youth who have left the education system before reaching college face significant challenges in preparing themselves for adult working roles. Like many young Americans, they may struggle to figure out what they want to "be" in life, and how to get there. However, many are obliged to do so without a high school diploma, a basic qualification for most entry-level jobs and a requisite step in pursuit of any higher education goals.

It is now widely accepted that technology plays an increasing role in the everyday lives of youth and young adults today. Indeed, many studies have shown that time spent on the internet, especially in out-of-school settings, is becoming dominant. Further, there is strong evidence as to the importance of technology for motivating participation and learning in a wide variety of in and out of school settings. Nonetheless, there is relatively little research on the uses of technology for promoting the non-cognitive skills, knowledge and attitudes to personal advancement in work or further schooling.

The present study investigated the uses of technology amongst out-of-school youth and their instructors in the context of youth development centers. This report follows on research conducted in four youth development centers, focusing on the experiences of technology use. The study was guided by two main research questions:

- In the context of a youth development programs, how is technology utilized by youth?
- What are the learners' views on the use of technology for the purposes of advancing their educational and career goals?

Underserved Youth

Given the significance placed on high school diplomas and college degrees in hiring decisions, a formal education may represent an individual's principal opportunity for employment and a living wage. The United States education system theoretically offers the nation's youth learning opportunities to develop the skills needed for upward social and economic mobility. However, high dropout rates are just one indication that for many

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students (and for numerous reasons) the system is ineffective. An examination of high school drop out statistics reveals that historically disadvantaged minority groups are particularly poorly served. In 2007, 16 percent of youth between the ages of 16 and 24 had dropped out of high school nationwide, and of those, approximately 19 percent were Black and 30 percent Latino (Sum, 2009). In some urban areas, the incidence of high school dropouts includes as much as 50% of minority populations. The challenges faced by these youth are at the heart of many economic and social stresses on individuals and communities in the United States.

The consequences are severe for these students whom the education system has failed. For example, data collected with the United States Census Bureau's Survey of Income and Program Participation (2001) shows a negative relationship between educational attainment and the durations of periods of unemployment. Individuals without a high school diploma experienced periods of unemployment that lasted 35 percent longer than those of individuals with at least some higher education (Gottschalck, 2006). Also, data from the Bureau's Current Population Survey (1998-2000) indicate, unsurprisingly, that substantial disparities in work earnings exist between high school dropouts and high school graduates, and the gap widens with increasing levels of educational attainment (Day & Newburger, 2002). Similarly, analyses of data from the U.S. Survey of Income and Program Participation (2001-2003) show that households with low levels of educational attainment are more likely to suffer decreases in household income from year to year than are households with high levels of educational attainment (Hisnanick & Giefer, 2007).

Youth Development Programs

In the United States today, nearly 30 (?) percent of young Americans drop out of secondary school without a diploma (REF?). Of these, about 45(?) percent opt to return to further their education. Some decide to continue their formal education after only a brief period of time out of school, while others may return to such programs five or ten years downstream. Specialized adult education programs have been designed to try to meet the needs of this diverse population of non-traditional learners.

The particular focus of the present study is out-of-school youth, approximately 16 to 21 years old. One kind of resource available to this population is a youth development program. These programs are often community-based rather than school-based, and thus better positioned to reach individuals who are no longer attending school. Generally, youth development programs seek to offer a safe and caring environment, and to develop in young people the skills and competencies necessary to become responsible adults. For example, a program may aim to guide participants in their pursuit of a high school credential, higher education opportunities, career goals, or all three.

However, whether they are successful in doing so remains largely unknown. Few solid evaluative studies have been conducted to investigate the effectiveness of youth development programs (Aron & Zweig, 2003). This is due in part to complicated methodological issues (Roth & Brooks-Gunn, 2003). For example, in order to determine the efficacy of a program, specific programmatic goals must be identified, as well as valid and reliable measures of each outcome. Furthermore, to know if, and to what degree, a program positively impacts the

lives of its participants, an analysis must consider the effects beyond the presence or absence of a particular behavior or skill. For example, one common goal for the youth who attend these programs is to earn a General Educational Development credential (GED), an alternative to the high school diploma. Despite a strong push from social and educational institutions for individuals to obtain a GED, several studies indicate that in terms of employment and income-generation, the benefits of this credential do not match those of a traditional high school diploma (Smith, 2003; Tyler, 2003). Therefore, to take account of whether someone has passed the GED exam is necessary, but insufficient in determining how a youth development program has affected her/his life.

Roth and Brooks-Gunn (2003) surveyed numerous well-respected youth development programs regarding their respective goals, atmosphere and daily activities. They then analyzed the responses in order to paint a clearer picture of youth development programs, the kinds of development they aim to foster, and their methods of doing so. Relevant to this study are the particular activities with which these programs seek to engage and teach their participants. The reported activities varied widely, with some programs completely structured and others characterized by no structure at all. With both open-ended questions and prompts regarding specific categories of activities (e.g. social skills training, job placement/training), survey respondents were asked to characterize the typical goings-on within their respective programs. Interestingly, there was no mention of technology use. Respondents did not discuss technology in their responses, nor did the researchers explicitly seek information about possible technological components of the programs. This is somewhat surprising given the central role various forms of technology play in the lives of young people today.

Technology in Education

Now more than ever, technology is an integral component of daily life for people all over the world. Information and Communication Technology (ICT) innovations such as computers, the Internet, social networking websites, smart phones, and digital video games are now firmly established within and inextricable from social, educational, and professional spaces. For young people growing up with these technologies, there is no other way of life. These so-called digital natives have a seemingly natural interest in technological advancements and many are quite adept at utilizing and navigating ICTs.

In the 1990s, many policymakers and educational practitioners began to extoll the promise of technology to address issues of equity and mobility in the educational and employment arenas. The common belief was that providing youth with better (or even universal) *access* to technology would have a positive effect on their academic performance, social development, and their opportunity for gains in income (Wenglinsky, 2005). This notion seemed particularly pertinent to programs designed for at-risk youth for two reasons. First, the presence of technology would serve to draw in youth, who often are considered the first adopters of cutting-edge technologies and far outstrip adults in the ease with which they learn the skills needed to use them.

Second, for youth from disadvantaged backgrounds, technology seemed to promise to multiply the impact of intervention and assistance programs that had previously relied

primarily on high-cost, intensive training and staffing. Many efforts focused on installing computers in schools and community centers (often called community technology centers or CTCs) in the belief that the presence of technology would enable educators and service providers to reach greater numbers of people faster, more efficiently, and in day-to-day contexts, in response to the demands of the communities where these youth live (Livingston, 2002). Indeed, with public and private funding for public libraries, schools, and community agencies to invest in information technology (IT) hardware, many lower socio-economic status (SES) groups experienced significant improvements in the quality and quantity of available technology (NTIA, 2004). Yet availability of technology alone has not demonstrated the hoped-for impact on the skills and job opportunities available to youth in these communities, as research over the past decade has demonstrated (Gardenfors & Johansson, 2005).

As technologies and the patterns of access have changed, the assumptions and promises regarding the success of technology-based programs for youth have become more complex. The unqualified enthusiasm for technology as a "cure-all" has been tempered by experience. The "digital divide" is no longer thought of as the chief target for investment. Although access to technology and computer-assisted instruction in schools has increased markedly, and to a greater degree in lower SES school districts, poor children still have less or lower-quality and bandwidth access to instructional materials that enhance the integration of technology into the learning experience (Becker, 2000, Livingston, 2002). A study by Children's Partnership (Lazarus, et al., 2005) documenting the impact of IT on youth in education, health, workforce preparation, and community engagement, showed that youth in general are benefiting from the presence of IT in their communities, schools, and homes, though it also indicates major disparities in those positive impacts indexed largely to SES.

Taking heed of these lessons, the conversation should no longer be about whether or not technology is used, but about how it is used. Indeed, successful educational applications of information technologies are widespread and diverse. Examples of effective usage include initiatives implemented in some of the less developed countries worldwide (Wagner, 2009). In industrialized countries such as the U.S., advancements in technology have aided educational practices with fingertip access to information, distance-learning opportunities, and advanced methodologies for integrating and evaluating information. In fact, the U.S. government recently drafted the National Educational Technology Plan, which details the intended uses of technology in the nation's K-12 schools, colleges and universities (Office of Educational Technology, 2010).

Given the common appeal of technology amongst young people, the use of ICTs is a potentially powerful method to actively engage young people in the teaching and learning process. However, a survey of the relevant literature uncovers little research conducted in this area. While there are several studies focused on Internet resources for career counseling, these studies do not investigate the actual use of these resources by youth counselees, nor their perspectives regarding such resources. Also, a majority of these resources are designed for use by the adult counselor rather than by young learners. The available research instead focuses on identifying and classifying the myriad of Internet sources that offer career

counseling and guidance (e.g. Harris-Bowlsbey & Sampson, 2005) and on career counselors' attitudes towards Internet resources (e.g. Boer, 2001; Hambley & Magnusson, 2001).

More than ever before, young people are taking in information through web-based and other IT-based portals in individual (home) settings. Researchers have increasingly taken note of these changing patterns of youth information engagement. However, research on the current uses of technology-based interventions to support out-of-school youth, as well as research as to their effectiveness, is conspicuously absent from the relevant literature. The knowledge that this type of research would yield is much needed as educators strive to better serve this population.

Methods

Setting

The Urban Youth Center[2] is a community-based nonprofit in a metropolitan area and a leading provider of educational and training services to out-of-school youth and young adults. The center's locations spread throughout the city, house diverse programs focusing on the development of literacy skills, occupational skills and life skills. The youth learners at these centers have been disconnected from the education system after dropping out of school and/or adjudication. The present study was conducted at four youth development center locations.

Data Collection and Analysis

This study utilized the ethnographic methods of participant observation and semi-structured interviewing to investigate the use and perceptions of technology amongst young people participating in youth development programs. At three of the centers, observations were conducted in a job-readiness training (JRT) class. At all of the centers, the JRT classes are guided by a common curriculum, which outlines interactive and experiential activities that are focused on key competencies (e.g. job interviewing) and characterized by flexibility (e.g. individualized instruction). At the fourth center observations were conducted in a GED preparation class. Each of the four classes met for one hour per day, five days a week. Observations were conducted in each of these four classrooms twice per week, for five weeks for a total of approximately 40 hours of observation time.

Each class was composed of approximately ten African American learners between the ages of 14 and 21, and each with a roughly equal number of males and females. However, attendance in each of the classrooms was inconsistent. Eight learners volunteered to be interviewed, two learners at each site. All interviews took place after class time and were audio recorded with consent from the interviewees. Observation notes, as well as the content of the interviews were analyzed to identify emergent categories and themes. The data was analyzed first within each program site and then across sites to identify any commonalities.

Findings

[2] All names are pseudonyms.

Class organization

The organization of each of the observed classes varied greatly. At times, class did not take place in a designated classroom. Instead, students would work independently in locations throughout the center. Activities included worksheets focused on topics such as the identification of skills valuable in the workplace and resume building. Students would find the instructor when they needed guidance. The instructor also met with students individually for activities such as, mock job interviews.

Students used the computers in the labs for word processing tasks, such as typing resumes and cover letters for job applications. Students also used the computers to check email, search for jobs, and to visit social networking and entertainment websites (e.g. Facebook, YouTube). Teacher-directed use of the computers centered around job searches and research on colleges and universities. A standard instruction from the teacher was, "I want you to go online and search for jobs." Students would often peruse unrelated websites while the teacher worked with students individually on the details of resume construction.

When students met in the classroom, more interactive learning took place. One observed lesson involved a discussion of conflict at work. The instructor asked students to come up with appropriate responses to various hypothetical work place conflicts. The group discussions provided an opportunity for students to ask questions of the teacher and share relevant personal experiences with one another. During another lesson, the students and instructor gathered together in a classroom to watch a film, "Sunset Park," in which a new coach teaches, and learns from, a basketball team in an urban high school. The instructor used the film to spark conversations on the topics of education, poverty, achievement, and role modeling.

Across the centers, class-appropriate Internet usage consisted of students searching the websites of familiar businesses (e.g., McDonald's, Foot Locker), or of popular job search engines (e.g., Monster, Idealist) for job openings. On the job search websites, students would typically filter their searches by location, and then browse for jobs that interested them. However, they did not seem as familiar with standard conventions for advertising job openings. Several students did not read about the qualifications for the jobs that they found online, and as a result, proceeded to apply for positions for which they did not meet the minimum education requirements. Students did find the Internet to be a useful resource, with several commenting that submitting job applications online was preferable to in-person application processes due to the time saved.

Few instances of relevant Internet use deviated from this pattern. One notable exception was a student locating and initiating communication with an individual via Facebook in order to discuss the student's career aspirations. The individual who was located on Facebook was working within the student's desired field, and by initiating the contact, this student created an opportunity to receive informal career advice and opened the door to other networking possibilities.

Directed technology use

With an initiative called *Learning Connections*, the authors developed an online communications platform (web portal) that seeks to help youth and young adults connect with education and career pathways. The online environment consolidates and promotes access to an array of advising, educational, and employment tools and resources in order to direct and motivate users to set, work toward, and attain their unique learning and employment goals. By providing a flexible, context-sensitive tool to help learners to identify pathways and potential outcomes, the online environment intends to empower individual learners to make informed choices about career and educational goals, and then to connect the users to the appropriate programs and services.[3]

For the dual purposes of providing this resource to the learners and receiving their feedback on the current version of the website, we introduced the *Learning Connections* tool to a subset of 20 learners at the centers. The students engaged with the website in the computer labs at their respective centers, with the researchers present to provide guidance and answer questions.

Although the students appeared able to navigate the website without much difficulty, they tended to ask numerous questions of the researchers and/or the class instructors. For example, after completing the questionnaires and receiving an assessment of their relevant skill levels in relation to those needed to perform the duties of a particular job, numerous students wanted to know how to interpret and use this information. A typical response was, "Okay, now what do I do?" Several students expressed agreement with a determination that their skills in a particular area needed improvement and followed the provided links to local job training centers. For example, after Tyrese completed the career questionnaire and received several job suggestions, he clicked on the construction worker option. This brought him to a new screen including information on training opportunities for construction work. He then noted the address and phone number of a local firm providing apprenticeship positions. A common frustration with the website was that it does not provide direct access to job applications. A number of students mentioned that they expected to be able to see current job listings and submit applications.

[3] The website consists of a series of brief questionnaires that prompt the user with questions regarding job interests, job skills, and education and job training experiences. Following completion of the questionnaires, the system generates several job suggestions based on responses to the 'job interests' questionnaire, and then offers a comparison of the user's job skills and education with the skills and education level needed for particular jobs. Also included is a literacy quiz. This component of the website allows users to assess their own language, reading and math skills with a multiple-choice quiz. The users are then provided information regarding whether their demonstrated skills adequately prepare them for particular jobs. By drawing explicit connections between the users' literacy skills and those required for specific jobs, the literacy quiz results become more than just a score on a test. This more "tangible" approach to self-assessment facilitates goal setting. Additionally, the website includes information on, and links to, local resources for educational and job training opportunities.

Conclusions

This report began with two main research questions: How is technology used by youth on their own and in the context of a youth development program? And, what are these young learners' perspectives on technology use for the purposes of advancing their educational and career goals? Observations revealed that technology use in these youth development centers consisted of basic Internet searches for job openings. Instructors would direct the learners to conduct the searches, but the learners would do so independently. At times, the learners instead chose to spend the time doing other things, most often visiting social networking and entertainment websites. The observed Internet job search process in such youth centers was repetitive. That is, learners would access the website of a company, check for any job openings, then move on to the next company's website. The activity did not inspire much thought or self-reflection, the kinds of behaviors central to identifying a suitable career path and the appropriate action steps.

Given that young people had chosen to attend classes at the center, it seems they did not lack motivation to improve their skills and find employment and/or education opportunities. Rather, they needed guidance to do so. When presented with a more structured Internet-based tool (i.e. *Learning Connections*), their behavior was markedly different. The activity invited, and with initial introductions to the website required, interaction with the researchers or instructors. This interactive quality facilitated self-reflection while providing the occasion to interact with more knowledgeable adults.

In this study, we sought to understand how technology is used and perceived in youth development centers. To take advantage of the Internet as a resource requires more than technological skills. While young people today are often quite comfortable navigating the Internet, this technology serves only as a tool that can facilitate the complicated process of career development. The vast amount of information available via the Internet is ineffective for these purposes without a structured way of using it. The guided self-assessment framework of *Learning Connections* appears to be a valuable complement (and motivator) for improved participation and retention in youth and adult education programs.

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