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Teaching individuals with intellectual disability to email across multiple device platforms[☆]



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ABSTRACT

The purpose of this study was to examine the use of email by people with intellectual disability across multiple technological devices or platforms. Four individuals with intellectual disability participated in this study. Participants were taught how to access and send an email on a Windows desktop computer, laptop, and an iPad tablet device. Results indicated a functional relation. All participants acquired and generalized sending and receiving an email from multiple platforms. Conclusions are discussed about the importance of empowering people with intellectual disability by providing multiple means of expression, including the ability to communicate effectively using a variety of devices.

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1. Teaching individuals with intellectual disability to email across multiple device platforms

Basic digital literacy skills are now critical for one to function in today's rapidly changing, yet increasingly technologically oriented, society. Transforming every aspect of daily life, technology is intertwined with everything from work and educational settings to domestic and recreational settings. Routine tasks, once involving lengthy and complicated processes, are now easiest completed electronically, with the idea of boosting the productivity and convenience for the users. As more daily interactions (communication, purchasing, and applications) are converted to digital tasks, digital skills are becoming increasingly critical for their completion. Therefore, technology has the power to separate and exclude both socially and economically those individuals who lack the skills (Clark, 2004). According to Carruthers (2009), technology allows people to think differently, to experience life in ways they never have before, and to do things better and more easily. For people with intellectual disability (ID), acquiring and maintaining essential digital literacy skills facilitates greater independence in school, at home, in the community, and at work. In the interest of improving employment, independence, and overall quality of life, functional digital literacy skills should be specifically addressed as part of the educational programming for students with ID. This study examined one aspect of digital literacy, the use of email across multiple technological platforms.

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1.1. Technology and people with intellectual disabilities

Technological advances have afforded many people opportunities to gain access to information they otherwise may not have obtained, including people with disabilities. The positive outcomes of using technology for people with ID are well documented in the literature, such as enhanced communication systems, extensions of social networks, and greater overall independence, in addition to gains in academic and literacy skills (Browder, Wakeman, Spooner, Ahlgrim-Delzell, & Algozzine, 2006). Previous research also supports the use of handheld mobile devices for students with ID to acquire and generalize a variety of community and vocational skills (Cihak, Kessler, Alberto, 2007; Cihak, Kessler, & Alberto, 2008; Davies, Stock, & Wehmeyer, 2002a,b; Davies, Stock, & Wehmeyer, 2004; Ferguson, Myles-Smith, & Hagiwara, 2005). Mobile devices (e.g. tablets, smartphones) are shown to be effective tools for empowering students with ID to live and work with greater independence (e.g., Cihak, Fahrenkrog, Ayres, & Smith, 2010; Kagohara et al., 2010; Mechling, Gast, & Seid, 2010; Van Larrhoven, Van Larhowen-Myers, & Zurita, 2007; Wade & Troy, 2001). Computers and mobile devices, such as tablets and smartphones, offer educators a highly customizable new way of providing the multiple means of representation to support the independence and inclusion of students with ID (McMahon & Smith, 2012).

Although the research supports that individuals with ID benefit from technology, it is known that this population does not always fully take advantage of what technology has to offer them (Happestad, 2007; Kling & Wilcox, 2010; Tanis et al., 2012). Carey, Friedman, and Bryen's (2005) survey of people with disabilities indicated that people with disabilities were less likely to have a computer in their home as someone without a disability. Moreover, only 18% of people with ID were reported to have a working email address (Palmer, Wehmeyer, Davies, & Stock, 2012). Since knowledge is generated largely through social interaction and social networking (i.e., "who you know"), digital communication skills may be as important as skill competency (i.e., "what you know").

1.2. Email use

Email can ease social isolation and advance academic, career, and leisure goals by connecting people with ID to a community of peers and a network of supports (Burgstahler, 2002). Stanford and Siders (2001) developed an email pen friend correspondence project. They found a significant effect in favor of email pen friends compared with conventional pen friends. Stanford and Siders suggested that while any kind of pen friend offers students a genuine and authentic experience, email pen friends receive more immediate feedback. Networked communication (i.e., initiating relationships and communicative interactions) is also useful as a means of facilitating participation in the mainstream digital world (Boyd & Ellison, 2008). For example, e-Buddies (www.ebuddies.org) is an email "pen friend" project designed to support people with ID to find and make friends on the Internet. If persons with ID are at a disadvantage with job networks, and if networks affect employment for persons with disabilities as they do the general population, then it is possible that a portion of the unemployment experienced by persons with ID is due to this lack of social networking (Potts, 2005). In addition to providing a means for more immediate electronic communication exchanges, an email address also increasingly functions like a digital passport for many different login systems and social networking sites like Facebook, Twitter and other web applications. "If disability narrows the set of jobs one is qualified to fill, then having the right channels of job contacts to get access to that smaller set of job opportunities may be even more crucial to employment success" (Potts, p. 22).

The ability to successfully use email across multiple platforms is an important life skill for people with ID. It increases access to communication tools regardless of the brand(s) of devices available and may reduce problems when new versions or operating systems occur (i.e., Windows 7 to Windows 8). In addition, the type of computer or mobile device available for individuals will vary between home, different computer labs, and the individual's personal mobile device. Therefore, the purpose of this study was to examine the effects of teaching college students with ID to access, send, and receive emails across behaviors or different platform devices. A secondary goal was to teach students that their university-based email account could be accessed from any computer or device with an Internet connection. Specifically, we wondered will college students with ID acquire, maintain, and generalize emailing skills independently across multiple platforms?

2. Methods

2.1. Participants and settings

The participants in this study were four college students with ID, who attended a Post-Secondary Education (PSE) program. All were eligible for special education services under IDEA during grades K-12. All of the students were diagnosed with intellectual disability. The students' ages ranged from 21 to 23 years old. Participants were selected based on the following: (a) diagnosis of an intellectual disability, (b) participation in a post-secondary education program, (c) no email address, (d) no physical disability which impeded the performance of the skill, and (e) agreeing to participate in the study. Also, students reported they could only check their university email with computers on the campus. Three males (Ben, Carl, and Dylan) and one female (Ann) participated in this study. Participants' IQ ranged from 51 to 70 and adaptive behavior standard scores ranged from 65 to 71. Table 1 lists characteristics for each participant. In addition, all participants had at least a fourth grade reading level according to the Brigance Transition Skills Inventory (Brigance, 2010).

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