Using a Manual Approach to Improve Digital Literacy Skills in Adults with Developmental Disabilities

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The procedures in this staff training manual are meant to be used by agency staff, as part of the broader services they provide, or under supervisor of agency staff.
Dedication

This thesis has been dedicated to my family and friends who have supported me through my thesis writing process. Without you guys none of this would have not been possible.
Abstract

In today’s digital world, technology has become a prime source of communication. For adults with intellectual (IDD) and developmental disability (DD) who have limited opportunity to communicate through the use of technology, they often find it challenging to communicate with the rest of society. Because of this phenomenon, adults with IDD and DD are at an even greater disadvantage. Therefore, it has been hypothesized that if this population was able to communicate through the use of technology they would be able to increase their social skills, digital literacy skills, and overall quality of life. The aim of this facilitator's manual was to provide the agency with an in-depth 11-session workshop that taught basic digital literacy skills (i.e. how to operate an iPad and how to email). Through these 11 sessions, participants would learn how to operate an iPad, format an email, and attach documents and pictures to their emails. Unfortunately, due to time constraints, the manual was unable to be implemented. Therefore, the student researcher administered a Likert Scale questionnaire to the agency’s supervisor and to two other staff members to assess the usefulness, organization, and content of the facilitator's manual. The results and feedback provided by the agency indicated that this manual would be a great asset to their programming because of its usefulness, organization and content. Because the majority of the agency’s clientele enjoyed using iPads and technology, but needed assistance to operate them, the agency made the recommendation to add an additional session to assist in teaching clients how to use the iPad effectively. For future research, it is suggested that the agency considers implementing the facilitator’s manual to determine the effectiveness of the student researcher’s findings.
I would like to acknowledge my support network that has helped and provided encouragement to me during the process of writing this thesis. This thesis has been an emotionally and mentally draining process. Without my fantastic support network, none of this would have been possible.
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Chapter I: Introduction

The term “developmental disability” encompasses a wide variety of intellectual and physical disabilities. These individuals are more prone to experiencing delays in cognitive and or motor skills (Houwen, Visser, Van der Putten, & Vlaskamp, 2016). Because of these cognitive and motor skill delays, individuals with a developmental disability may find it difficult to communicate with others (Houwen et al., 2016). As a society, social skills have become an increasingly important skill to acquire as individuals grow into their adulthood. With society using technology as one of their primary sources of communication today, individuals diagnosed with a developmental disability, who find using social skills challenging, may have difficulty integrating into the community (Cihak, McMahon, Smith, Wright, & Gibbons, 2015).

Advances in technology over the last two decades have resulted in numerous options for communication, with email as one of the most popular modes of digital communication. Those who have difficulty adapting to the technological age find it much harder to communicate without digital literacy skills (Cihak et al., 2015). Cornell University (2009), defines digital literacy as “the ability to find, evaluate, utilize, share, and create content using information technologies and the Internet” (para. 1). Teaching these skills would provide an opportunity to create new forms of communication and improve upon already existing competencies for clients with developmental disabilities. Through the use of Apple’s iPad, clients with developmental disabilities can receive communication support to make their lives more efficient (Jowett, Moore & Anderson, 2012). The iPad provides clients the opportunity to increase communication skills and digital literacy while promoting social interaction through devices (Browder, Wakeman, Spooner, Ahligrm-Delzell, & Algozzine, 2006).

As part of integrating clients with developmental disabilities into the community, social skills must be present to have effective communication. Cihak et al. (2015), states with the use of digital literacy training clients with developmental disabilities will find communication through electronic messaging accessible (i.e. e-mail). By teaching clients how to email and use an iPad they will start to develop a sense of accomplishment as well as feel more independent (Cihak, Fahrenkrog, Ayres, & Smith, 2010). Clients will receive social reinforcement from sending and receiving emails, overall increasing emailing behaviour (Cihak et al., 2015). Miltenberger (2012), defines social reinforcement as “a behaviour producing a reinforcing consequence through the actions of another person” (para. 2). Implementing the iPad into the client’s life will be beneficial for social skill building because the iPad is globally recognized for its multi-functional uses and appears more socially acceptable for communication (Kagohara et al., 2013).

Through examining the literature, this thesis strives to explore if adults with developmental disabilities can increase their knowledge of technology and use these skills to communicate more effectively with others in society. In order to increase independence and communication in clients with developmental disabilities, clients must be taught digital literacy to improve effective communication through technology (i.e. iPad and Email). The literature review analyzes current issues that individuals with developmental disabilities are exposed to due to a lack of social skills. With a lack of social skills being one of the more common factors for individuals with developmental disability, the literature suggests the use of technology as a means to increase social skills. The methodology section will contain an inclusion and exclusion criteria for participants, materials, the procedures and measures used, as well as a description of the setting. In the results chapter, participant’s assessments scores will be collected then evaluated to show if the intervention demonstrated a significant difference from baseline. To
conclude, the discussion will consist of a condensed summary of the results, the strengths and limitations, implications for the field, and recommendations for future research.
Chapter II: Literature Review

Developmental Services Ontario (2016) defines a developmental disability as “a permanent disability that affects a person’s ability to learn. A developmental disability can range from mild to severe and usually is present at birth, but can also develop before the age of 18” (Para.1). The University of Minnesota (2016) states that individuals diagnosed with a developmental disability often need some assistance in areas such as self-care, mobility, communication, and building life skills. Having difficulties in these areas often makes it more challenging for individuals to experience and learn new skills. According to Ozonoff (1997) for individuals with Autism Spectrum Disorder, cognitive ability may range considerably, ultimately resulting in deficits in their attention span and executive functioning. Due to these individual’s impairments, Badia, Orgaz, Verdugo, Ulla, & Martinez (2011) stated that individuals with developmental disabilities often have limited opportunity to access new leisure activities such as the use of technology. As a result of these limitations, clients may only acquire a minimal amount of education and instruction on how to operate these technological devices (Badia et al., 2011). Providing age-appropriate recreational activities to people with developmental disabilities may increase their motor and cognitive skills, as well as their overall quality of life (Caldwell, 2005). Technology has become a daily part of individuals’ lives as a method of communication for leisure and career-focused purposes (Cihak et al., 2010). With limited access to these leisure activities (i.e. technology), clients with developmental disabilities may find it challenging to communicate with their friends, family, and employers (Badia et al., 2011). If individuals with developmental disability were granted more frequent access to technology, they would have another option available to them during unstructured periods of the day (Schleien, Wehman, & Kiernan, 1981). With more frequent use of technology, individuals with developmental disability overall may show increases in social interaction, inclusion within the community, and overall improvement in technological use (Schleien et al., 1981). With ongoing advancements in the field of technology, those with developmental disabilities may experience difficulties when given an opportunity to use these devices. If clients were trained how to use these devices, results would show an increase in both digital literacy as well as communication skills (Cihak et al., 2010 & Jacklin & Farr, 2005).

The iPad has been used as an assistive technology device to improve digital literacy and communication in clients with Autism Spectrum Disorder (Jowett et al., 2012). In contrast with other assistive technology devices, Kagohara et al. (2013) stated that the iPad may be a more socially accepted form of communication for clients with a developmental delay because of people’s familiarity with it. The combination of the iPad's innovative technology using a touch screen, speech-to-text software, educational applications, and overall a user-friendly interface, clients will find this device simple to use (Linder et al., 2013). Arthanat, Curtin, & Knotak (2013) found when using the iPad for teaching purposes, the participants of the study exhibited difficulty staying on task. This study was conducted using 4 boys who ranged from 11-13 years of age (Arthanat et al., 2013). Each participant had to meet the inclusion criteria of having a diagnoses of autism spectrum disorder, an individual education plan in at least two classes, as well as operated an iPad prior to the study (Arthanat et al., 2013). The study was implemented in a classroom setting that was used for specialized education for students with developmental disabilities. The study was conducted for 10 weeks four times per week for 25 minutes each session. The goal of this research was to determine whether the use of an iPad or computer would help to achieve the students' academic goals. The results revealed that although the iPad
did increase the students’ academic goals, it was found to be more of a distraction for staying on assigned tasks (Arthanat et al., 2013). When providing instruction to clients, a task analysis allows the instructions to be separated into manageable steps that clients can complete (Miltenberger, 2012). When teaching a new skill using an iPad, Curtin, & Knotak, (2013) found using the behavioral techniques of a task analysis paired with prompts and redirection may also help participants sustain attention to the task at hand.

Pratt (2016) defined a task analysis as breaking down complex tasks into a sequence of smaller steps or actions (Para. 1). By breaking down a task into smaller and more attainable steps, the participant is able to gain more successful approximation. Kagohara et al. (2011) conducted a study using video modeling paired with an 8-step task analysis to teach three students how to watch videos on an iPod touch. The results showed that all three students were able to achieve the target behavior of watching videos on the iPod touch by using the task analysis (Kagohara et al., 2011). In comparison to Kagohara et al. (2011), Cihak et al. (2015) created a 21-step task analysis to teach individuals with intellectual disability how to email across different platforms. The task analysis included steps how to set up an email account and reply to email (Kagohara et al., 2011). Sigafoos et al. (2005) also studied the use of video prompting paired with a 10-step task analysis to teach adults with a developmental disability how to make microwavable popcorn. The results showed that video prompting paired with a task analysis was an effective approach when used with an adult population (Sigafoos et al., 2005). Although all three of these studies used a different population to achieve their results, they display the use of a task analysis can be effective in teaching a new behavior. Therefore, using a task analysis to teach emailing behavior may demonstrate to be effective with the developmental disability population.

Bellini, Akullian, & Hopf (2007) defined video modeling as a behavioral technique used to help teach a target behavior. The process of video modeling is conducted by showing the participant a video of the target behavior and when the video has ended the participant will perform the behavior (Bellini et al., 2007). Sigafoos et al., (2007) stated video modeling has the potential to be more effective when given instructions. This method reinforces more independence for participants as well as decreases the use of resources for agencies (Sigafoos et al., 2007). According to Kagohara et al. (2011) through the use of video modeling, clients will have a better understanding of the instructions given as well as complete the task more efficiently. The behavioral technique of video modeling has been used in a variety of studies to teach skills to individuals with developmental disabilities. In Kagohara's et al. (2011) study, three students were taught how to operate an iPod touch using the behavioral technique of video modeling and the results showed that the intervention was effective. Whereas, in Blum-Dimaya's, Reeve’s, Reeve’s & Hoch's (2010) studied, four children with autism were taught how to play a video game using the behavioral techniques of video modeling and an activity schedule, the participants were able to learn how to successfully play the video game (Blum-Dimaya et al., 2010). In summary, it can be shown that the behavioral technique of video modeling can be used among a variety of settings and populations. In regards to the school and home setting, video modeling can be applied with limited assistance (Kagohara et al., 2011). Kagohara et al. (2011) with enough behavioral repetition, video modeling could allow individuals with a developmental disability to increase their independence by learning new skills on their own with little to no assistance from staff or caregivers.

According to McClennahan & Krantz (1999) the use of an activity schedule provided a structured plan for individuals to increase the likelihood of practicing their independence skills.
These schedules used visual prompts such as pictures and words to help direct the participants to the next task (McClannahan & Krantz, 1999). Copeland & Hughes (2000) suggested that once the participants are able to acknowledge the visual prompt (i.e. picture) as a guide to the next activity, the support staff can refer participants to the activity schedule for more clarification. In contrast with Copeland & Hughes (2000), Koyama & Wang (2011) argued that because some individuals’ cognitive abilities may vary depending on their functioning, an activity schedule that uses symbols or pictures may not be the best approach for every individual. Koyama & Wang (2011) stated that allowing the individuals to create their own activity schedule that implements their choices that they have selected, may increase engagement and self-determination while completing activities. By using behavioural techniques such as an activity schedule, clients with developmental disabilities may find it easier to learn how to be independent. Activity schedules can be individualized to allow for clients to finish task at their own speed (Chan, Lambdin, Graham, Fragale, & Davis, 2014). These activity schedules also serve as a gestural prompt, therefore, only limited staff instruction is needed, overall increasing the client’s independence (Chan et al., 2014). Koyama & Wang (2011) recognized that the research showed that activity schedules can be used amongst a wide variety of populations, but very few studies have been conducted using adults with intellectual disabilities for participants. Anderson, Sherman, Sheldon, & McAdam (1997) used an activity schedule for adults with a developmental disability to help them independently select and participate in a leisure activity. The participants selected were two males and one female, ranged in age from 21-37 years and, had limited communication skills. For this study, the three participants that resided in a group home setting were asked to use an activity schedule to help structure their daily schedule. The results showed that the use of an activity schedule for this population was shown to be an effective approach because the participants were able to select activities during the day that they enjoyed (Anderson et. al, 1997). In order for these activities schedules to be effective, the supervising staff must implement them according to their schedule, for participants to increase their independence skills (Koyama & Wang, 2011).

O’Brian (1986) recognised the link between limited social interaction for those with developmental disabilities and their ability to develop basic life skills. Teaching the life skill of independence to individuals with developmental disabilities is vital for intergrading them into the community (Servatius, Fellows, & Kelly, 1992). Oxford Living Dictionaries (2016) defined being independent as the ability to “think or act for oneself” (para.7). Copeland & Hughes (2000) stated that with limited independence skills, people with intellectual disabilities are more likely to have a need for further assistance from a caregiver, teacher, or support worker to complete the assigned task. Wehmeyer & Palmer (2003) examined individuals with intellectual disability who lived a more restrictive lifestyle. Wehmeyer & Schwartz (1998) found that these individuals showed lower levels self-determination and independence. These results displayed that in order to build independence within individuals with developmental and intellectual disabilities, freedom to select their activities should be given. With consistent prompts being provided to clients, prompt dependency may occur when prompts are heavily used (MacDuff, Krantz, & McClannahan, 1993). This can become an issue when providing instructions to clients with disabilities because it may limit their opportunity to practice their independence skills (Koyama & Wang, 2011). Teaching people with developmental disability digital literacy skills can help to increase their independence within a variety of settings (Cihak et al., 2015). With the use of technology, people with developmental disabilities can complete task with less assistance and gain experience practicing their independence skills (Cihak et al., 2010).
In today’s society, email has become one of the most common forms of digital communication. An email address allows the user to access content through the internet as well as download software on the computer, but the main purpose for an email address is to digitally communicate with others (Cihak et al., 2015). As society continues to advance in the technological age, digital communication has become increasingly more important for individuals to have in their repertoire (Cihak et al., 2015).

For individuals with a developmental disability that find communication challenging, email provides a mode for establishing and maintaining social interaction (Light, Arnold, & Clark, 2003). In Bradley & Poppen’s (2003) study adults with disabilities learned how to email as a mode of communication for meeting the other participants. In comparison to Bradley & Poppen’s (2003) study, Burgstahler (2002) taught twenty individuals with developmental and physical disabilities how to email to increase social interaction and advance academic skills over the course of one year. The researchers collected results from the participants using a pre and post measure which consisted of ten question (Burgstahler, 2002). The results showed that after the intervention of teaching participants how to email and use the computer, participants were more likely to have social contact with others (Burgstahler, 2002). The technology of email has created the opportunity to achieve many communication possibilities. Unlike face-to-face communication, email enables the user to have an unlimited amount of time to respond to the message received (Sundqvist & Ronnberg, 2010). This allowed individuals to think about their response before replying to the message. When writing an email to another person, the email ordinarily contains a form of greeting and closing statement (Van der Meij & Boersma, 2002). When applying this concept to individuals with developmental disabilities, teaching them how to email will give them a chance to ask questions and build their empathy skills (Van der Meij & Boersma, 2002). By teaching clients with developmental disabilities how to email, the clients will develop a better sense of connection with society (Caldwell, 2005). Overall, using the iPad to teach clients with developmental disabilities how to email will not only improve digital literacy skills but, improve their social connections to society.

When looking at social connection to society, Petner-Arrey, Howell-Moneta, & Lysaght (2016) stated that an introduction to the work force for individuals with intellectual disability may help them to improve their social interaction. According to Petner-Arrey, Howell-Moneta, & Lysaght (2016) individuals with developmental and intellectual disability have been limited in opportunity to obtain employment. The World Health Organization (2011) stated that people with intellectual and developmental disability are often limited in employment opportunities because of the insufficiency of resources and training. The World Health Organization (2011) also stated that because of these insufficiencies of resources and training, individuals with intellectual and developmental disability may encounter prejudice and unsympathetic work environments. To increase the chances of working in a positive environment, Carter, Austin & Trainor (2012) outlined the several factors for individuals with intellectual disabilities to improve. Some of these factors included excellent communication skills, social skills, a variety of life skills, and in-depth support and training (Carter et al, 2012). With the proper supports in place, people with an intellectual disability may find employment to create a larger social network as well as provide more opportunities for social interaction (Andrews & Rose, 2010).

According to Kagohara et al. (2011) with the use of technology within the workforce, people with a developmental and intellectual disability can use technology as a method of increasing their communication and employment skills. By teaching these individuals how to use technology to communicate, they may experience an increase in inclusion within the workplace,
independence, and empowerment (Kober & Eggleton, 2005). Cihak et al. (2015) suggests with 
the proper support and training, individuals with developmental and intellectual disabilities may 
also learn how to communicate through the use of email with colleagues. Community-based 
employment gives an opportunity to individuals with intellectual disabilities to be employed at 
an agency under the supervision of a support worker (Petner-Arrey, Howell-Moneta, & Lysaght 
2016). This method of employment has been shown to be effective when implemented with 
individuals with intellectual disabilities because it allowed them to be intergraded into the 
community, build social skills, as well as gain valuable employment skills (Jahoda, Banks, & 
increase the employee’s quality of life as well as give them a sense of belonging. In García-
Villamisar & Hughes (2007) study, 44 adult participants diagnosed with autism were selected 
and placed in a community-based work setting for a total of 30 weeks. The results showed that 
after completing this study the participants exhibited a significant increase in cognitive 
performance (García-Villamisar & Hughes, 2007). It can be noted that there are a variety of 
positive outcomes from implementing community-based employment such as cognitive 
improvements, teaching independence, empowering people with intellectual disability and, most 
of all intergrading people with disabilities into the community (Kober & Eggleton, 2005; García-
Villamisar & Hughes, 2007; Jahoda et al., 2009).

Teaching individuals with developmental and intellectual disabilities how to use 
technology and email creates a variety of opportunities for them. Technology has become one of 
the fastest growing industries today and with social communication becoming so easily accessed, 
social interaction has never been easier. For people with developmental and intellectual 
disabilities that have limited social skills, the assistance of technology may provide a better 
solution. With the correct applications, the iPad or other communication devices, technology can 
become an excellent tool for increasing social skills as well as improving digital literacy. 
Through the use of behavioural techniques such as a task analysis, activity schedules, and video 
modeling, individuals with developmental and intellectual disabilities may be able to learn how 
to operate these technological devices as well as increase their cognitive ability overall. By 
learning how to use technology and email, these individuals will develop their social skills and 
increase their social interaction. Acquiring appropriate social skills is an important part of life 
especially when entering the workplace. Although people with developmental and intellectual 
disability have limited opportunities for entering the workplace, one key factor for increasing 
their possibility for employment is how well they are able to communicate with others. 
Employment for people with developmental disability can have many positive benefits for them 
such as an increase in independence and learning new life skills. Overall, teaching individuals 
with developmental and intellectual disabilities how to use technological device and email can 
lead to a variety of opportunities for them. This literature review illustrates the many benefits 
that may come with teaching the skills of emailing to the developmentally delayed population. 
After examining the literature, the hypothesis previously made about individuals with 
developmental disabilities can be justified with the research provided.
Chapter III: Method

Settings

Agency
This agency is targeted toward teaching individuals with developmental disabilities life skills and how to integrate into the community. The goal of this agency is for clients to develop the necessary life and social skills to become more independent in everyday life. Through weekly community outings, clients are able to gain valuable experience on how to socially interact with others, take public transportation, as well as raise awareness and break stigma about developmental disability. The agency facilitates a variety of educational programs throughout the year such as swimming, physical activity, and gardening. The most recent program created by the student researcher incorporated teaching digital literacy to clients with developmental disabilities to increase independence. This digital literacy program was conducted within the facility’s boardroom to ensure that participants had a quiet space to limit surrounding distractions.

Facilitator
The group sessions in the manual were facilitated by a staff member from the agency. The responsibility of the staff member facilitating the digital literacy manual entailed selecting participants that meet the program criteria, teaching participants all materials provided in the manual in chronological order, collecting and scoring assessments given, providing positive reinforcement, and having discussions after every session where feedback was provided.

Group Participants
This manual was designed to teach individuals with intellectual and developmental disabilities how to operate technological devices. Because understanding technology requires an abundance of cognitive processing, it was recommended that participants selected were high enough functioning to manage the assigned task and meet program goals. When selecting participants, the facilitator used the inclusion and exclusion criteria to determine if participants were eligible to be enrolled in the study. The inclusion criteria consisted of possessing the cognitive and motor skills needed to type on an iPad, comprehend instructions given, a member of the facility that has been diagnosed with a developmental or intellectual disability, and exhibits limited digital literacy skills. The exclusion criteria included clients who were already technology savvy, have a visual impairment, attend the agency once a week, and have limited reading comprehension skills. The selected participants should range from age 20 to 60 and should include both men and women in the study.

Selection Procedure
Each participant was selected by the staff member facilitating the program or the director of the agency. All participants met the inclusion and exclusion criteria in order to be enrolled in the intervention. During the intake process, the facilitator selected 4 participants per intervention. By only taking 4 participants, the facilitator was able to provide more assistance to all participants as well as develop stronger rapport.

Consent
Before the intervention was started, informed consent was given by every participant. All selected participants were asked to attend a 30-minute information session where informed
consent was explained along with an overview of the study. Because individuals with developmental and intellectual disability over the age of 18 are considered consenting adults, they may give informed consent without the approval of their parents or caregiver. It should be noted that contact with the parents or caregiver was made by the facilitator to inform them about the study.

**Materials**

**iPad**

Each participant was assigned an iPad with a number on it for the duration of the intervention. This was done to ensure that each participant got the same iPad every session. Each iPad was installed with Microsoft word as a method of teaching participants how to type an email. The iPad comes built with a camera, a touch screen, text to speech software, Wi-Fi capability and a user friendly interface. All of these features assisted participants in learning how to email and develop their digital literacy skills.

**Boardroom**

The intervention was conducted in the boardroom within the agency to ensure that participants remain focused during sessions. The boardroom came equipped with a large table, adjustable seating, a projector and projector screen. This quiet space accommodated both facilitator and participants for teaching sessions, providing and receiving feedback, and staying focused.

**Facilitator’s Manual**

The Facilitator’s manual consisted of 3 different sections: assessments; an outline of the 10 sessions; an instruction for all interactive activities. The facilitator was responsible for delivering all assessments pre and post intervention. The manual contained 3 different assessments that participants completed before and after being enrolled in the intervention. These 3 assessments were designed to analyze the participant’s digital literacy skills. The outline of each session was provided within the manual. Each session was structured with a goal the participants had to achieve by the end of the week. This helped to create a baseline for all participants. Within the outline of each session, there was a list of topics along with different resources that the facilitator used to complete the session. Instructions for all interactive activities was provided within the facilitator’s manual. As part of the post-test participants completed an interactive digital literacy based jeopardy game. This allowed participants to answer their questions orally if they previously had difficulty writing out their answers.

**Measures**

**Facilitator’s Feedback Survey**

To determine the effectiveness of the facilitator’s manual, a feedback survey was administered to the agency’s staff and supervisor (Appendix A). By allowing the agency’s staff and supervisor to analyze and critique the manual, feedback was provided to the student researcher regarding the strengths and weaknesses of the manual. The facilitator’s feedback survey contained a total of 10 questions and was ranked on a Likert scale. The Likert scale rating was ranked from, (1) Strongly Disagree, (2) Disagree, (3) Neutral, (4) Agree, or (5) Strongly Agree. The agency’s staff and supervisor were individually sent a copy of the survey as well as the facilitator’s manual via email followed by a phone call to ensure conformation of the email.
Before completing the survey, the agency’s staff and supervisor were asked to review the manual. The agency’s staff and supervisor were asked to read the instructions provided at the top of the survey before completing the assessment. After reviewing the manual, each survey participant was asked to read each question and circle the number that corresponds with how effective the manual was. Each question was created to assess different aspects of the manual to ensure that each part of the manual was well rounded. The questions in the survey were created based on the manual’s organization, readability, user friendliness, appearance, assessments, and content. The results collected from this survey were analyzed by the student researcher and were recorded in a bar graph format using descriptive statistics. The feedback collected from the facilitator survey was incorporated into the editing process of the manual.

Procedures
Overview

The intervention was conducted twice a week over the course of 5 weeks for a total of 10 sessions. Each session was 45 minutes in length with 15 minutes for discussion and feedback after the session is over. During this time, participants learned skills such as how to operate an iPad, sign into and write emails, identify applications on the iPad, and understand technological terminology. The facilitator led all sessions to remain consistent with participants through the duration of the study. This helped the facilitator build rapport with the group. To increase the chances of memory retention in participants, sessions were conducted twice a week (i.e. once at the beginning and once at the end). The intervention was conducted within the agency’s boardroom to provide for a quiet learning environment. This intervention selected 4 participants that met the inclusion criteria to be part of this study. The facilitator used a variety of techniques that allowed the participants to understand the material being taught. Some of these techniques include but are not limited to video modelling, task analysis, prompting, and psychoeducation. Towards the end of the intervention, participants were asked to complete an interactive component (i.e jeopardy game slideshow). This interactive component was used as an assessment to determine if the intervention was successful.

Session Structure

An outline of the first session is described below as a guideline for the layout of the other 9 sessions. Because the initial session was used to complete the assessments, it may run longer than an hour. The time spent on the two assessments in the initial session will be put towards interactive components where the participants can learn how to use the iPad more effectively.

During the initial session, participants will be asked to complete the two assessments (i.e. QOLI and digital literacy rating scale) administered by the facilitator. When participants have completed the assessments, the group will be led in a group discussion. The facilitator will discuss the informed consent document that participants previously signed prior to the intervention and reiterate that all participants are able to withdraw from the study at any point. Following this topic, each participant will have a chance to share with the group what their goal is for this intervention and how they will reach it. Finally, to conclude the session, participants will have a chance to practice their typing on the iPad. The facilitator will dictate a sentence for the participants to type on the computer to show their level of typing skills. To end off the session the facilitator will do a brief summary of the session and ask for feedback from the
participants.
Chapter IV: Results

Facilitator’s Manual

The Facilitator’s Manual was created by the student researcher and can be found in Appendix B. The research supports the use of technology for individuals with developmental disabilities. However, after examining the literature provided in the literature review in chapter II of this thesis, it is evident that there has been a limited amount of research conducted on the benefits of teaching individuals with developmental disabilities how to email. This manual was created to assist the agency with teaching digital literacy and emailing skills to individuals with developmental disabilities.

Encompassed within this manual are five sections that promote the importance of emailing in today’s society. With topics such as goal setting, introduction to email, formatting emails, email functions, and how to send emails, participants will develop a greater understanding of how to effectively use email.

Facilitator Feedback Survey

To determine the effectiveness of the facilitator’s manual, a feedback survey was administered to the agency’s staff and supervisor (Appendix A). By allowing the agency’s staff and supervisor to analyze and critique the manual, feedback was provided to the student researcher regarding the strengths and weaknesses of the manual. The facilitator’s feedback survey contained a total of 10 questions and was ranked on a Likert scale. The Likert scale rating was ranked from, (1) Strongly Disagree, (2) Disagree, (3) Neutral, (4) Agree, or (5) Strongly Agree. Displayed below are the results from the supervisor of the agency as well as two staff members. Each bar represents a question answered by one of the facilitators at the agency. This bar graph was measured based on facilitator’s satisfaction when reviewing the manual.

Facilitator A’s Feedback

The results received from Facilitator A’s (agency supervisor) feedback survey indicated that the facilitator agreed with all, but three items on the assessment. These three items were created to assess the relevance of the manual at their agency (i.e. formatting, usefulness in current setting, and overall potential use in the agency). On these three items, the facilitator’s results showed that the three items were scored as neutral which may reflect that the manual does not fully meet the needs of the facilitator.

Facilitator B’s & C’s Feedback

The results received from Facilitator B’s and C’s (program coordinators) feedback surveys showed identical results which indicated that they agreed with all items on the assessment, but three. These items were created to assess visual appeal, readability, and potential use in the agency. On these three items, the facilitators’ results showed that the three items were scored as neutral which may demonstrate that more visuals and examples could be added to the manual.
Figure 2. Data collected from facilitator B and C’s feedback survey.

Satisfaction and Feedback on the Facilitator Manual

No feedback section was added to the facilitator’s feedback survey; therefore, the facilitators provided feedback to the student researcher through the use of email. Overall, they agreed that the manual has potential to be useful for their agency if additional edits were made to the manual. Their clients enjoy the use of technology when given free activity choice during program hours, but sometimes need assistants on how to operate the iPads. Because some clients need assistants when operating the iPad, the manual should be targeted towards individuals that are unfamiliar with how to use an iPad. The facilitators agreed that, in order for the manual to be practical for their clients, more sessions need to be added on how to operate the iPad as well as more resources.
Chapter V: Discussion

Overview

Individuals with developmental disabilities often need more one-on-one support when learning a new skill, therefore, this manual was designed to help aid in learning a new skill for this population. While on placement, the student researcher observed how engaged clients were when using an iPad, but realized the amount of assistance required from staff to operate the iPad effectively. Therefore, after talking to staff members at the agency, the student researcher came to the conclusion that a manual outlining a program focusing on teaching the clients digital literacy skills and step-by-step instructions for emailing would be beneficial for clients. When designing the sections for this manual, some key aspects were taken into account (i.e. visual appeal, user friendliness, readability, organization, and usefulness of content within sessions). By focusing on these areas within the manual, it provides guidance to the facilitator for implementing the program more effectively.

Incorporated within the manual are ten digital literacy sessions designed to be implemented over the course of 5 weeks. In the digital literacy sessions, participants will learn the skills of email terminology; how to format and send an email; how to operate an iPad; and how to attach pictures and documents to an email. The empirical research shows that individuals with developmental disabilities often have limited social skills because they have minimal opportunities to access technology. Therefore, teaching participants the digital literacy and emailing skills as outlined in the manual, will help to increase social skills, digital literacy skills and overall quality of life. This manual has been created to assist in the development of digital literacy and emailing skills in individuals with developmental disabilities. Because society is advancing in the field of technology, it is essential to possess the ability to email and the skills to operate technology. When completing the literature review, there were limited studies completed on the effectiveness of teaching individuals with developmental disabilities how to email. This manual will help to improve the gap of knowledge in this area.

Strengths

This manual has a variety of strengths when examining the layout (i.e. visual appeal, organization, and readability. The visual appeal of the manual increases the probability of the facilitator using the manual. For an agency that works with individuals with developmental disabilities, who enjoy using technological devices, this manual offers new resources about teaching digital literacy skills and emailing. This manual is well-organized, which allows the facilitator to read and understand the material with minimal difficulty. In order to properly learn and develop these digital literacy skills each time the program is implemented, the facilitator should only select a maximum of 4 participants. This will provide for more one-on-one support from the facilitator that participants need while learning a new skill. This manual is intended for a wide range of adults with developmental disabilities. Lastly, the manual has been created to increase social interaction, therefore, social skill building activities and group work have been placed in the manual as well as a variety of assessments (i.e. jeopardy game show).

Limitations

Although the research supports the use of teaching individuals with developmental disabilities how to use technology, the program outline in this manual has not been implemented. Therefore, it is unclear if this program will improve their social interaction and overall quality of
life. In order to obtain a clearer result, the program should be implemented and its’ effectiveness assessed. Because this is a new type of program for this agency, they must dedicate time and staff to acquire resources needed to implement the program effectively (i.e. a quiet space, a time slot to implement the program, iPads for participants, and proper staffing).

After receiving feedback from the staff members and supervisor surveys, it was clear that more content on how to operate an iPad needed to be added to the introduction session to increase the participants understanding. Through the completion of the second draft edits, an iPad training session was added to the manual as requested by the agency. By adding more information about how to operate an iPad into the beginning of the manual, the agency could select more participants that have limited knowledge with iPads to complete the program. Another limitation that the agency felt the manual had was the amount of additional resources for the participants (i.e. worksheets and visual task analysis). These limitations and suggestions were taken into consideration and modified where appropriate.

**Multilevel Challenges to Manual Implementation**

**Client level.**
In the field of working with individuals who have a developmental disability, it can be hard to predict the client’s needs. When working with such a diverse population, developing a program that fits the needs of each client can be challenging. While on placement, it was difficult finding potential participants who met the criteria of the manual and attended the agency frequently enough to benefit from the program. This may pose a challenge for future facilitators administering the program using the manual.

**Program level.**
The manual will be used by one of the on-site staff members at the agency. This manual focuses on building life skills related to digital literacy and increasing social interaction through the use of email. Participants who are enrolled in this intervention may experience difficulty learning these new life skills if they have limited knowledge in the area. This manual has been designed for the developmentally delayed population, but likely the facilitator will have to adapt lesson plans to meet the needs of specific participants.

**Agency level.**
Whenever research uses human participants, an ethics board is needed to approve the intervention before it can proceed. In the case of the manual, the facilitator must obtain consent from each participant as well as get approved by the agency’s ethics board in order to start the intervention process. Due to time constraints, the student researcher was unable to implement the intervention, therefore; the manual was left with the agency to run the intervention after the student researcher had completed placement.

**Societal level.**
On a societal level, this manual has potential to teach individuals with intellectual and developmental disability how to email and use technology. This is an important life skill to have when communicating with others. For people with intellectual and developmental disability, learning these skills provides an opportunity to integrate into the community with limited staff
support. The challenges that this population may face while learning these life skills are the following: remembering all content taught; proper writing format; and the ability to use skills taught across multiple devices. If participants are able to overcome these challenges, then they will gain the ability to use technology fluently.

**Contributions to Behavioural Psychology Field**

In order for this research project to contribute to the field of behavioural psychology, the facilitator’s manual should be implemented to demonstrate whether there was a significant difference in participant’s ability to email after completing the digital literacy program. After completing the program, participants’ results may show an increase in social interaction, an overall quality of life and a better sense of connect to society (Caldwell, 2005). This manual provides multiple opportunities for participants to work as a group and discuss ideas. This allows participants who have limited social interaction skills to practice them while learning the information the manual provides. Another contribution to the field that this manual brings is the variety of assessments within a facilitator’s manual. With this manual’s jeopardy game assessment, participants who have difficulties with reading will have an easier time answering the questions.

**Recommendations for Future Research**

Although the program outlined in the manual was not implemented, due to time constraints, future research may consider additional resources based on the selected participants within the study. This may help to better explain digital literacy concepts that are new to participants. This manual helps to assist in the learning of new digital literacy and emailing material, but because technology is constantly upgrading this manual will need to be updated to keep up with the technology field. If more time was invested in the manual, facilitators may consider adding a social media and internet safety component to current content. Overall, there has been limited research conducted on using an iPad to teach computer skills to individuals with developmental disabilities, but as the field of psychology continues to advance, more research in this area would be informative. Nevertheless, for this manual can provide more insight on the effectiveness of teaching individuals with developmental disabilities how to improve their digital literacy and emailing skills.
References


Cornell University (2009, October 20). Digital literacy is… Retrieved from https://digitalliteracy.cornell.edu/


Appendix A

Facilitator’s feedback survey
On a rating scale of 1 to 5, 1 being strongly disagree and 5 being strongly agree, circle a number to demonstrate your level of contentment with the components contained within the manual.

| 1. The content of the manual is visually appealing: |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |

| 2. The manual is formatted in a way that facilitator can easily implement: |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |

| 3. The manual is organized well: |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |

| 4. Manual resources are easily located: |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |

| 5. Information provided within the manual is easy to understand: |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |

| 6. Information provided within the manual is relevant to the clientele: |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |

| 7. The manual includes interactive activities that participants will learn from: |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |

| 8. The manual is usefully in the current setting: |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |

| 9. The participant will be benefit from enrolling in the intervention: |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |

| 10. In the future, I would use this manual: |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
Appendix B

A Training Manual for Increasing Digital Literacy Skills in Clients with Developmental Disabilities
Increasing Digital Literacy and Emailing Behaviour for Adults with Developmental Delays

*All pictures have been used with the permission of pixabay.com

DEVELOPED BY KAMAR SIMMONDS
HONORS BACHELOR OF BEHAVIOURAL PSYCHOLOGY
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Introduction

Purpose

- This manual has been designed to assist the facilitator in instructing the digital literacy program.
- This manual will allow the participants to develop their digital literacy skills as well as teach them the basics of emailing.
- By completing this program, participants will have gained skills needed to operate an iPad without assistance from staff members.

Participant Criteria

- Males and Females between the age of 18-60 that attend the facility at least twice a week.
- Participants who have limited to no knowledge about technology (i.e. iPad or emailing).
- Participants who are diagnosed with a developmental or intellectual disability who are high enough functioning to operate an iPad and meet the program goals.

Summary of Sessions

Section 1: Goal Setting and Teaching the Basics

- Participants will be asked to complete two assessments that focus on their knowledge about technology.
- The facilitator will provide the goals and outcomes of completing the program.
- The introduction to the program will include showing the participants the technology that they will be using for the duration of the program.
- Teach participants how to operate an iPad.

Section 2: Introduction to email

- During these sessions, participants will be introduced to the basic components of email.
- Using the email address provided, participants will be asked to send emails to practice their skills.
- At the end of the week feedback should be provided to participants.
Section 3: Formatting Emails

- During this section, participants will learn how to properly format an email.
- The facilitator will teach participants how to properly carbon copy another person into an email.

Section 4: Attachments and Forwarding

- Participants will be given opportunities to learn how to attach pictures and documents to an email using Microsoft Word.
- The facilitator will provide instructions on the difference between the reply function and the forwarding function.

Section 5: Email to Parents and Final Assessments

- With all the skills learned during the program, participants will be asked to use these skills to write an email to their parents or caregiver.
- Before completing the course, participants must complete the two assessments to show the effectiveness of the program.
- There will be a jeopardy game provided as another form of assessment to give those who have trouble writing a chance to prove their knowledge.
GOAL SETTING & TEACHING THE BASIC
Session #1

Goals for the Session

- Have participants complete baseline assessments provided on the next page.
- Provide information about the program being conducted.
- Ask participants what they would like to achieve out of the program.
- Assign each participant an iPad and keep the numbers on file so that each participant receives the same iPad each time they are used.
- Test the participant’s typing skills by dictating a sentence to see how well they can find the keys.

Assessments

These assessments will be conducted at the beginning and end of the program to show if there was a significant difference from baseline. All results collected from participants will be recorded in a bar graph format where it can be visually analyzed. Each participant will be given 30 minutes to complete each assessment.

Quality of Life Inventory Scale (QOLI): The first assessment participants received is the quality of life inventory scale (QOLI). The QOLI was scored on a 5-point rating scale (1 - unhappy with quality of life to 5 - very happy with quality of life). This QOLI is a 7 question assessment designed to analyze how technology affects participants lives.

Digital Literacy Rating Scale: The second assessment is the digital literacy rating scale. This 7 question assessment was designed to rate the strength of the participant’s digital literacy skills. This questionnaire was rated on a 5-point rating scale (1) Never, (2) Rarely, (3) Sometimes, (4) Almost Always, or (5) Always.
Quality of Life Inventory Scale (QOLI)

Name: ___________________________  Date: ___________________________

Coordinators: ___________________________

1. On a scale of 1-5 how many conversations did you have outside the facility this week?

   1 (0)                        2 (1-3)                        3 (4-6)                             4 (7-9)                      5 (10+)

2. On a scale of 1-5 how often did you feel stressed this week?

   1 (Never)           2 (Almost never)        3 (Sometimes)            4 (Almost always)         5 (Always)

3. On a scale of 1-5 how often have you used technology to communicate with another person this week?

   1 (Never)           2 (Almost never)        3 (Sometimes)            4 (Almost always)         5 (Always)

4. On a scale of 1-5 how often did you feel upset, sad, or depressed this week?

   1 (Never)           2 (Almost never)        3 (Sometimes)            4 (Almost always)         5 (Always)

5. On a scale of 1-5 how often did you feel happy about something you did?

   1 (Never)           2 (Almost never)        3 (Sometimes)            4 (Almost always)         5 (Always)

6. In two sentences or less write about a positive experience you had during this week?

______________________________________________________________________________

______________________________________________________________________________

______________________________________________________________________________

7. In two sentences or less write about a negative experience that happened to you this week and how you solved it?

______________________________________________________________________________

______________________________________________________________________________

______________________________________________________________________________
Digital Literacy Rating Scale

1) How many times have you asked for help with using the iPad within the last month?
   a) 0 (never)       b) 1-3 (rarely)      c) 4-6 (Sometimes)      d) 7-9 (Almost Always)      e) 9 or more (Always)

2) On a scale of 1-5, how often do you get to use the iPad for leisure activities?
   a) 1 (never)        b) 2 (rarely)       c) 3 (sometimes)        d) 4 (Almost Always)       e) 5 (Always)

3) On a scale of 1-5, how confident do you feel when using the iPad without assistance from a staff member?
   a) 1 (never)        b) 2 (rarely)       c) 3 (sometimes)        d) 4 (Almost Always)       e) 5 (Always)

4) On a scale of 1-5, how confident do you feel typing on the iPad when searching for material?
   a) 1 (never)        b) 2 (rarely)       c) 3 (sometimes)        d) 4 (Almost Always)       e) 5 (Always)

5) On a scale of 1-5, how challenging is it for you to operate the iPad?
   a) 1 (never)        b) 2 (rarely)       c) 3 (sometimes)        d) 4 (Almost Always)       e) 5 (Always)

6) On a scale of 1-5, how confident are you identifying application on the iPad?
   a) 1 (never)        b) 2 (rarely)       c) 3 (sometimes)        d) 4 (Almost Always)       e) 5 (Always)

7) On a scale of 1-5, how much do you enjoy using the iPad?
   a) 0 (never)        b) 1-3 (rarely)      c) 4-6 (Sometimes)      d) 7-9 (Almost Always)      e) 9 or more (Always)
Session #2

Goals for the Session

- Explain the types of programs the participants will be using during the sessions (i.e. Microsoft Word & Outlook).
- Explain the functions on the iPads before handing them out.
- Provide participants with the rules and guidelines of using the iPads.
- To practice finger placement, download a typing app on the iPads.
- Give the group a chance to practice typing by allowing them to write a sentence using the program Microsoft word.
- Explain to the group that the red lines indicate a spelling mistake and the blue lines indicate a grammar mistake.

Quiz: This Icon quiz is designed to help participants recognize the application icons. This quiz will not be used as baseline data it is only to be used for the purpose of learning.

Materials needed:
- A copy of the quiz for each participant
- Microsoft Word & Outlook
- 1 iPad per participant

Icon Quiz Answers:
1. Safari
2. Microsoft Outlook
3. Microsoft Word
4. Camera
Icon Quiz

1.

2.

3.

4.
Session #3

Goals for Session

- Provide a demo of the iPad to show participants how it works
- The facilitator should only focus on showing the participants the basic functions of the iPad (i.e. power button, volume controls, unlock features, and how to open the applications)
- If the facilitator needs assistance explaining how to operate the iPad, located at the bottom of the page is a video
- After watching the video participants will be given the chance to demonstrate what they just learned (use the step-by-step sheet provided to guide them while they complete to task)
- When they have completed this exercise the facilitator will orally ask participants to name one of the functions the iPad is able to do
- If extra time is available, allow participants to play a game on their iPad.

Definitions:

**Power button:** control the power on the iPad

**Home Button:** used to return the user back to the home screen, awake the iPad from sleep mode, and activates Siri

**Volume control:** controls the level of sound that come out of the iPad

**How to operate an iPad for beginners**

https://www.youtube.com/watch?v=MewousGaE_Y
How to operate an iPad

1. Ensure that the iPad is fully charged or has at least 60% battery life left.

2. To turn iPad on, hold in the upright position and push the button in the top right corner.

3. When the iPad has turned on, slide or push the home button to unlock the iPad.

4. If there is a password to enter on the iPad, take the case off the iPad and look for the 4-digit password on the back of the case.

5. Enter these 4 digits into the lock screen to access the iPad.

6. To open an application on the iPad, find the application that you would like to use by sliding your finger towards the left or right of the screen.

7. When you have located the application you would like to use push on the box it is in.

8. When you have finished with the application push the home button twice to bring you the application screen where you can close the application.

9. Slide your finger up on the application to close it.

10. To turn the iPad off, hold the iPad in the upright position and hold down the button on the top right of the iPad for 5 seconds.

11. When the turn off button appears on the screen slide to the right on the screen to turn off the iPad.

12. When the iPad shuts off, place the iPad’s case back on it and hand the iPad back to the facilitator.
INTRODUCTION TO EMAIL
Session #4

Goals for Session

- Teach participants why emailing is an important skill to have as an adult.
- Explain to participants the importance of remembering your email address and password.
- Expand on the different features of email and what they are all used for (reply, forward, carbon copy, and attachments).
- As a group, create a sentence that they would like the facilitator to send in an email.
- When the sentence is created, type it up and send it to a selected person’s email to show the participants.

Definitions:

**Reply:** To type out an email and send it to another person

**Forward:** To take a previously received email and send it to a different person who has not received the email previously

**Carbon Copy:** To allow another person to view an email that is not directly involved with the email conversation

**Attachment:** To add a picture or document to an email for the receiver to view

Videos to help explain the importance of email effectively

https://www.youtube.com/watch?v=HTgYHfKs0Zw
https://www.youtube.com/watch?v=qNSztAqD19g
https://www.youtube.com/watch?v=fq5ahx7kyQI
Session#5

Goals for Session

- Allow the participants to send out an email using Microsoft Outlook.

- The Facilitator will provide more examples of when to use each feature of email (reply, forward, carbon copy and attachments).

- When finished providing examples about the features of emailing, the facilitator will send out an email to each person’s email address to give them another chance to practice replying to emails.

- Provide a feedback session to check the effectiveness of the program and what the participants have retained.

- If participants complete the activity successfully and there is remaining time allow them time for free activity choice on the iPads.
Formatting Emails
Session#6

Goal for Sessions

- **Prior to** the session, the facilitator will create an email with formatted errors throughout it for participants to find and fix as a group.

- The facilitator will provide step-by-step instructions of how to properly format an email using the website provided at the bottom of the page.

- As a group, participants will help to find the errors in the email. When they have completed the task, send the email to the facilitator.

- Create an operational definition to define **Carbon Copy** for the participants.

- As a group, select one participant’s iPad to write an email and to send the facilitator’s email address.

- Before sending the email, ensure that everyone is carbon copied into the email so that everyone will receive it.

Resource material:

**How to construct a proper email**
http://www.wikihow.com/Write-a-Formal-Email

**Tips for Email Formatting**
https://www.youtube.com/watch?v=qlO6K9MEH38
Session#7

Goals for Session:

- **Prior to** the session the facilitator will create an email with formatted errors throughout it for participants to find and fix as a group.

- The facilitator will provide step-by-step instructions of how to properly format an email using the website provided at the bottom of the page.

- Individually, participants will have a chance to practice their skills and find formatting errors within the email sent by the facilitator.

- The facilitator will provide limited instructions to participants.

- When the participants have completed their email and emailed it to the facilitator they may use the iPad for free activity choice.

Resource material:

**How to construct a proper email**
http://www.wikihow.com/Write-a-Formal-Email

**Tips for Email Formatting**
https://www.youtube.com/watch?v=qIO6K9MEH38
ATTACHMENTS & FORWARDING
Session#8

Goals for Session

♦ Start the session off by getting the participants to open Microsoft Word.

♦ Get participants to write about their day in Microsoft Word.

♦ Provide an in-depth explanation of how to attach a document or picture to an email.

♦ Play videos describing how to use the attachment feature on an email.

♦ Provide an interactive component and get participants to attach their journals to their email.

♦ When the journals are attached get them to write a one sentence email explaining what is in the attachment they are sending.

♦ Wrap up

How to attach a document using email

https://www.youtube.com/watch?v=MXg6UGRyjKU

Watch from (0:00-1:29)
https://www.youtube.com/watch?v=4_COInauzFl
Session #9

Goals for sessions

♦ Start the session off with a recap on attachments and emailing.

♦ Take the group through the previous session, but provide less instruction and assistance (If the participants get off topic redirect them back to the task).

♦ When they have completed their journal and are ready to send it, get participants to send their journals to the facilitator through email.

♦ When everyone has submitted their journal to the facilitator, they will be asked to get into pairs for the next set of instructions.

♦ The facilitator will provide an in-depth explanation of what the forwarding feature is used for when writing an email (touch on the difference between replying to an email and forwarding an email).

♦ Participants are to forward their journal to their partners and the facilitator will go around the room to ensure that everyone has completed the task correctly.

♦ Wrap up

Definitions

Reply: To type out an email and send it to another person

Forward: To take a previously received email and send it to a different person who has not received the email previously

Attachment: To add a picture or document to an email for the receiver to view
Email to Parents & Final Assessments
Session#10

Goals for the session

- Start the session off with review of the previous session and the concepts learned throughout the program to give participants a chance to relearn skills they might have forgotten.

- Touch on the importance of proofreading emails before sending them.

- Get participants to write a journal to their parents or caregiver describing what they did at the agency that day.

- When they have finished writing their email get them to attach a picture of themselves and attach it to the email before sending the email.

- Get them to send their email and then wrap up.

Definitions:

Reply: To type out an email and send it to another person

Forward: To take a previously received email and send it to a different person who has not received the email previously

Carbon Copy: To allow another person to view an email that is not directly involved with the email conversation

Attachment: To add a picture or document to an email for the receiver to view
Session#11

Goals for the Session

- Have participants complete the assessments provided on the next page.
- Provide a summary of everything the participants have learned throughout the 10 sessions.
- Ask participants if they found the program to be successful.
- Provide feedback to all participants with their strengths and weaknesses.
- Administer written assessments and when everyone has completed them administer the jeopardy game assessment.
- Give out certificate of completion.

Written Assessments

These assessments will be conducted at the beginning and end of the program to show if there was a significant difference from baseline. All results collected from participants will be recorded in a bar graph format where it can be visually analyzed. Each participant will be given 30 minutes to complete each assessment.

**Quality of Life Inventory Scale (QOLI):** The first assessment participants received is the quality of life inventory scale (QOLI). The QOLI was scored on a 5-point rating scale (1 - unhappy with quality of life to 5 - very happy with quality of life). This QOLI is a 7 question assessment designed to analyze how technology affects participants lives.

**Digital Literacy Rating Scale:** The second assessment is the digital literacy rating scale. This 7 question assessment was designed to rate the strength of the participant’s digital literacy skills. This questionnaire was rated on a 5-point rating scale (1) Never, (2) Rarely, (3) Sometimes, (4) Almost Always, or (5) Always.
Oral Assessments

Jeopardy Game Assessment: This assessment has been designed to give participants with limited writing skills a chance to show the facilitator they understand the concepts. Each question is worth one mark and participants may only answer a maximum of 3 questions. Participants may not ask others for any help on their turn or they will not get the mark for their answer.
Quality of Life Inventory Scale (QOLI)

Name: ___________________________ Date: ___________________________

Coordinators: ________________________

1. On a scale of 1-5 how many conversations did you have outside the facility this week?

1 (0)                        2 (1-3)                        3 (4-6)                             4 (7-9)                      5 (10+)

2. On a scale of 1-5 how often did you feel stressed this week?

1 (Never)           2 (Almost never)        3 (Sometimes)            4 (Almost always)         5 (Always)

3. On a scale of 1-5 how often have you used technology to communicate with another person this week?

1 (Never)           2 (Almost never)        3 (Sometimes)            4 (Almost always)         5 (Always)

4. On a scale of 1-5 how often did you feel upset, sad, or depressed this week?

1 (Never)           2 (Almost never)        3 (Sometimes)            4 (Almost always)         5 (Always)

5. On a scale of 1-5 how often did you feel happy about something you did?

1 (Never)           2 (Almost never)        3 (Sometimes)            4 (Almost always)         5 (Always)

6. In two sentences or less write about a positive experience you had during this week?

______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________

7. In two sentences or less write about a negative experience that happened to you this week and how you solved it?

______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
Digital Literacy Rating Scale

1) How many times have you asked for help with using the iPad within the last month?
   a) 0 (never)   b) 1-3 (rarely)   c) 4-6 (Sometimes)   d) 7-9 (Almost Always)   e) 9+ (Always)

2) On a scale of 1-5, how often do you get to use the iPad for leisure activities?
   a) 1 (never)   b) 2 (rarely)   c) 3 (sometimes)   d) 4 (Almost Always)   e) 5 (Always)

3) On a scale of 1-5, how confident do you feel when using the iPad without assistance from a staff member?
   a) 1 (never)   b) 2 (rarely)   c) 3 (sometimes)   d) 4 (Almost Always)   e) 5 (Always)

4) On a scale of 1-5, how confident do you feel typing on the iPad when searching for material?
   a) 1 (never)   b) 2 (rarely)   c) 3 (sometimes)   d) 4 (Almost Always)   e) 5 (Always)

5) On a scale of 1-5, how challenging is it for you to operate the iPad?
   a) 1 (never)   b) 2 (rarely)   c) 3 (sometimes)   d) 4 (Almost Always)   e) 5 (Always)

6) On a scale of 1-5, how confident are you identifying application on the iPad?
   a) 1 (never)   b) 2 (rarely)   c) 3 (sometimes)   d) 4 (Almost Always)   e) 5 (Always)

7) On a scale of 1-5, how much do you enjoy using the iPad?
   a) 0 (never)   b) 1-3 (rarely)   c) 4-6 (Sometimes)   d) 7-9 (Almost Always)   e) 9+ (Always)
CERTIFICATE of ACHIEVEMENT

THIS ACKNOWLEDGES THAT

HAS SUCCESSFULLY COMPLETED THE

DIGITAL LITERACY AND EMAILING TRAINING

[Month, Day]

YEAHX

SIGNED, [Signatory Name], [Signatory Title]

replace with LOGO
Reference

   https://www.youtube.com/watch?v=qlO6K9MEH38

   https://www.youtube.com/watch?v=HTgYHHKs0Zw

   https://www.youtube.com/watch?v=MXg6UGRyjKU

H. (2013, November 26). How to Attach Files to Email on iPhone and iPad. Retrieved January
   07, 2017, from https://www.youtube.com/watch?v=4_COInauzFI

   https://www.youtube.com/watch?v=qNSztAqD19g

   http://www.wikihow.com/Write-a-Formal-Email

   https://www.youtube.com/watch?v=fq5ahx7kyQI
Appendix C

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