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Using Instructions and Behavioral Skills Training to Teach Facebook Skills to Seniors

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Using Instructions and Behavioral Skills Training to Teach Facebook Skills to Seniors

by

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A thesis submitted in partial fulfillment
of the requirements for the degree of
Master of Arts
Department of Applied Behavior Analysis
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ABSTRACT

The senior population is growing faster than any other population group, and life expectancy is increasing. E-mail and social media enable people of all ages to stay in touch, and find information, resources, and entertainment. Positive effects are associated with computer and internet use for older adults, but not all seniors have embraced technology and some seniors feel negatively about it. Several different methods have been used to teach seniors computer skills, including mentoring, lecturing, and providing instructions, but not many procedures have been evaluated for effectiveness. In the current study, we recruited three to five seniors, taught them to use Facebook using instructions and behavioral skills training as needed, and then tested their skills. This study investigated the effectiveness of instructions alone with supplemental behavioral skills training as necessary to improve community-dwelling seniors' social media skills on Facebook.

CHAPTER 1:

INTRODUCTION

Older adults are an increasing proportion of the American population. In fact, the senior population is growing faster than any other population group. According to the Census Bureau, from 2000-2010, the population grew at a faster rate in the older ages than in the younger ages. Additionally, older adults are living a lot longer than they used to; there have never been as many older adults as there are currently, especially adults over age 85 (Cavanaugh & Blanchard-Fields, 2011). By 2040, there will be about 79.7 million adults over the age of 65, over twice their number in 2000 (USDHHS, 2012). It is important to consider the difficulties older adults face as they continue to age. According to the U.S. Department of Health and Human Services (2012) the proportion of adults living alone increases with advanced age. They stated that about 28% (11.8 million) of non-institutionalized older people (age 65+) live alone (8.4 million women, 3.5 million men). Living alone has been related to social isolation because of the structural obstacles it adds to social interaction (Russel, 2009). Also, the decline in mobility some adults over the age of 60 may face may limit their access to social activities and opportunities to create new social connections (Russel, 2009).

According to Loboprabhu and Molinari (2012), common causes for loneliness include the death of a spouse, adjustment problems following retirement, and loss of financial independence. Older adults may encounter some or all of these situations. The authors recommend that those at risk for loneliness should actively participate in the community as well as “stay informed about

current community and news issues” (p. 26). They also recommend that those at risk for being lonely should “stay in touch with family and friends and retain a sense of presence and involvement in the lives of others” (p. 26). Older adults can use computer technology to maintain their social relationships and activities. E-mail and social media provide a way for people of all ages to stay in touch with friends and family despite distance (Cavanaugh & Blanchard-Fields, 2011). Furthermore, many community groups and organizations have begun to use electronic communication (Van Volkom, Stapley, & Amaturro, 2014). Computer technology offers benefits such as communication, information, entertainment, and other resources. It has even been found that positive effects are associated with computer and internet use for older adults. For example, the probability of depression was estimated to be (28% and 33%, respectively) less among senior internet users compared to internet non-users (Cotton, Ford, Ford, & Hale, 2012, 2014). Although the causal direction of these findings is unknown, some studies found that participation in a training program was associated with similar effects for the senior participants. Sharpira, Barak, and Gal (2007) found that after participating in an educational computer-skills program, senior participants showed lower levels of physical difficulties, depression, and feelings of loneliness, as reported by several different psychological scales and checklists. They even reported improved life-satisfaction, sense of control, and quality of life. Increased participation in the internet following a training program also leads to higher computer efficacy, lower levels of computer anxiety, more positive attitudes about aging, higher levels of perceived social support and higher levels of connectivity with some seniors (Cody et al.1999). White et al. (1999) found that following 9 instructional hours and free access to computers in a common room, more than half of senior participants in another study reported decreased loneliness.

Although technological ability seems to be associated with benefits for seniors, computer-technology has not been universally adopted. McMurtrey, Downey, Zeltmann, and McGaughey (2010) surveyed 173 retired seniors and found that 55% owned a desktop computer and 20% owned a laptop computer (it was not clear how many owned both). Although it seems promising that these seniors own computer equipment, few reported regularly using their computer. Only 35% of respondents from a survey by McMurtrey et al. reported moderate experience with computers for any use, and 23% percent indicated no experience at all. Lagana (2008) found it noteworthy that while 50% of participants owned a computer, 10% reported very limited computer experience, acquired typically through witnessing others' use of a computer. Some older adults purchased or were given computer equipment but never used it (Lagana, 2008). A reason for lack of use may be because they may feel as if they do not have anyone to answer questions when faced with a problem while using the computer (Lee, Chen, & Hewitt, 2011). Sixty-four percent of those who did not own a computer reported that they had access to a computer for personal use (McMurtrey et al., 2011).

Regardless, a digital divide between the younger and older generation is evident when seniors are asked to report their feelings about computers, technology, and the internet. Compared to young adults (ages 18-44), both middle age (ages 45-64) and older adults (ages 65+) said they are less comfortable with current technology (Van Volkom et al., 2014). McMurtrey et al. (2011) reported that only 11% of participants felt "very comfortable" using computers, followed by 21% who indicated feeling "somewhat comfortable." This may be because older adults feel that computers are less user-friendly than younger and middle age adults do (Van Volkom et al., 2014). Also, older adults are more likely to feel that the pace of

technological innovation moves too fast, which may be indicative of why they report feeling the most frustration (Van Volkom et al., 2014).

Lee et al. (2011) found that the oldest of their participants felt that it was the most challenging to start learning and using computer-mediated information technology when compared to pre-seniors. For example, 15% of senior participants from the study by Cody et al. (1999) dropped out of the computer-training project because they felt it was too difficult to learn. Increasing senior's comfort level and providing them with additional positive experiences using the computer may contribute to bridging the digital divide and allow them to access the benefits technology has to offer.

A few techniques and formats have been used to teach seniors a variety of computer-skills for different purposes. Whereas some studies have evaluated the effectiveness of specific training programs, others only measured psychological variables such as depression, loneliness, and optimism, before and after the program. Common training methods in these types of studies include lectures (Campbell & Nolfi, 2005; Shapira et al. 2007; Smith, 2012), written instructions and manuals (Cody et al., 1999; Lagana, 2008; White et al., 1999), volunteer assistants/mentors (Lagana, 2008; Shapira et al., 2007; Shedletsky, 2012) or help-desk staff (White et al., 1999). Unfortunately, the effectiveness of the interventions in these studies was not evaluated.

On the other hand, a few studies have assessed the effectiveness of computer-training programs. Gist, Rosen, and Schwoerer (1988) found that modeling may be more effective than a tutorial when teaching computer software skills to seniors. Gist et al. (1988) provided half of their senior participants with a tutorial intervention, and the other half with a modeling intervention then compared their skill acquisition. The tutorial condition included step-by-step interactive instructions in which the participants completed exercises and solved problems. The

modeling condition included a video of a middle-aged man demonstrating the use of the software program. The man first described each step then enacted the correct response. Following this step, the participants had time to practice the response. According to the researchers, in both conditions, mistakes were immediately obvious to the participants. Results indicated that the modeling training method was more effective than the tutorial training at teaching specific computer tasks. The authors concluded that the participants' learning experience was enhanced by viewing the model properly execute the skill.

Goal-oriented training was shown to be significantly more effective than verbal persuasion for teaching new excel spreadsheet tasks to older adults, but both interventions lead to improved performance on repeated tasks (Hollis-Sawyer & Sterns, 1999). In this study, the verbal persuasion condition included performance feedback via the trainer which was designed to act as reinforcement. The feedback was positive and pertained to the participants' accuracy and correct-usage as well as ways to improve performance (Hollis-Sawyer & Sterns, 1999). The goal-oriented training condition used praise and goal-setting during the training. The participants were assigned goals and the trainer and participant discussed and analyzed the seniors' performance in respect to the goals (feedback). The authors thought that the participants may have adjusted their performance and effort as a result of observing discrepancies between expected goals and actual performance results over repeated practice (Hollis-Sawyer & Sterns, 1999).

Echt, Morrell, and Park (1998) compared groups of seniors who received animated interactive CD-ROM instruction to those who received an illustrated manual and found no significant difference in performance of computer skills. It is noteworthy that both training procedures were adjusted for seniors (e.g., extraneous text was eliminated, instructions were

written in clear, step-wise fashion). Furthermore, both interventions first described instructions in text, demonstrated the procedures with pictures, allowed time for practice then provided feedback on performance. One finding in this study was that the oldest of the participants (75-89 years old) required more assistance from the experimenter than the younger seniors (60-74 years old), which may have implications for future trainings.

Sanders et al. (2013) evaluated the impact of a client-centered program on computer skills with seniors from a local senior center. Seniors received several one-to-one computer-training sessions from occupational therapy students as part of the students' academic curricula. The students made task analyses for the seniors' goals, then backward-chained the tasks. The researchers developed training modules for common tasks, handouts with the content covered, and allowed the seniors to write directions in their own words. Seniors were also given homework every week. Although acquisition of skills was not measured directly, all of the participants in the study stated via questionnaire following the program that they successfully reached their goals.

Behavioral skills training (BST) has the potential to be an effective method for teaching seniors the computer skills they need to successfully participate in social networking. BST is a teaching procedure that packages modeling, instructions, rehearsal, and feedback to teach a person useful skills such as social skills or job-skills (Miltenberger, 2016). The effects of BST have been investigated with a variety of populations, including typically developing adults.

Himle and Wright (2014) used BST to teach 10 undergraduate students (ages 18 to 41) to correctly install child passenger safety restraints (CPSRs). The dependent variables were the number of errors based on 10 target behaviors, and a 16-item knowledge quiz. During baseline, participants averaged about six or more errors during installation. During BST, all participants

achieved a perfect performance. Three participants achieved no errors with just one BST trial, while the remaining needed two or more trials. From pre to post training, participants' quiz scores improved an average of 5.3 points (a 33 percentage point increase). It is noteworthy that 8 of 10 participants referred to the manufacturer's installation-and-use manual while installing the CPSRs during baseline. The researchers reported that the results suggest that because CPSR installation is difficult, the manual alone may not be sufficient.

Behavioral skills training was used to teach typically developing foster parents to conduct a functional assessment of problem behavior (Shayne & Miltenberger, 2013). The dependent variable was the percentage of correct responding for ABC recording, creating a summary statement, and making treatment choices. Parents' scores in baseline were highly variable. Results indicated that most participants improved their scores on all three dependent variables, and all participants' scores improved on at least one of the skills following training. Follow-up assessments showed that scores did not remain at the level seen during post-training, but they did remain above baseline. The researchers suggest that a refresher course may be necessary for participants to maintain these skills long-term.

Fetherston and Sturmey (2014) demonstrated the effectiveness of BST by teaching typically developing, adult school-instructors to use various intervention skills including discrete trial teaching, incidental teaching, and activity schedules throughout three separate experiments. Results indicated that after receiving BST, all instructors met criterion for teaching trained responses and improvements even generalized to untrained teaching responses.

Behavioral skills training has also been used in the health-care field. Graudins, Rehfeldt, DeMattei, Baker, and Scaglia (2012) taught dental hygiene students and staff to implement behavior analytic strategies while performing oral care procedures. Participants were scored on

the percentage of steps performed correctly on a series of checklists. Researchers found that all participants rapidly acquired the skills taught (within four BST sessions) and used them effectively in the natural environment.

BST may be an appropriate method to teach seniors computer skills because it provides an active learning experience that has proven to be an effective across various skills (Fetherston & Sturme, 2014; Graudins et al., 2012; Himle & Wright, 2014; Shayne & Miltenberger, 2013) and has even been proven to be more effective than instructional manuals (Shayne & Miltenberger, 2013) or informational presentations alone (Gatheridge et al., 2004). The current study aims to teach seniors computer skills within the website Facebook because Facebook is the most popular social networking site in the United States (Raine, Smith, & Duggan, 2013), but many seniors may not have experience with it. For example, McMurtrey et al. (2011) found that over 90% of senior participants reported they do not use a computer for social networking. Facebook provides a modality for communicating with friends, family, and community members who share similar interests, but it requires skills for fluent use. A hands-on interactive approach with embedded social reinforcement may be the most suitable for this population due to their limited experience. One librarian reported that during a computer skills class, few of her senior students felt brave enough to experiment without her guidance (Smith, 2012). Although Facebook offers help and support, basic computer navigation skills are required to utilize these features. For example, the novice senior computer user may not know where to find the search bar, scroll bar, or other important icons. Modeling provides an opportunity for the senior to see the behavior executed correctly, with the additional opportunity for the learner to ask the instructor any remaining questions. Rehearsals with positive and corrective feedback are conducted until the learner exhibits the correct response, so no learner is left behind.

Facebook skills can be easily task analyzed, and providing users with instructions is a simple and inexpensive approach to training that may be effective for some of the population. Furthermore, many of the behaviors typically taught using BST do not entail natural feedback, which is why the socially mediated reinforcement involved may be necessary. When a user successfully executes a Facebook skill, a visible change is usually apparent on the website itself (e.g., seeing the photo uploaded on a friend's page, seeing their event published). Therefore, if the participant successfully executes the skill following instructions alone, the visible change may sufficiently reinforce the behavior. Although some researchers have used instruction as a means to teach seniors computer skills (Cody et al., 1999; Lagana, 2008; White et al., 1999) the evidence supporting instructions as an intervention is lacking. The purpose of the current study is to evaluate the effectiveness of instructions alone to teach seniors to use social media correctly, as well as evaluate the necessity and effectiveness of BST, which will be implemented for participants who do not acquire the skills with the instructions. A secondary purpose is to evaluate the social validity of participating in both styles of computer-training, as well as investigate participants' feelings of loneliness and depression at various stages of the study.

CHAPTER 2:

METHOD

Participants

The researcher distributed an Institutional Review Board approved flier with her contact information electronically by means of an e-newsletter at a senior community and an e-mail to members of a life-long learning institute affiliated with a university in Florida. The first several individuals who contacted the researcher with interest in the study were given an Eligibility and Pre-screening Consent form (see appendix A) and the Mini Mental State Exam (MMSE) (Folstein, Folstein, & McHugh, 1975) to test cognitive function because older adults are at risk for cognitive decline which may affect their ability to learn. Participants were required to be at least 65 years old, achieve a score of 27 or higher on the MMSE, indicate that they were motivated and interested in improving their social-networking skills, and state that they had not participated in a computer class in the last 3 months, and own or have daily access to a desktop or laptop computer with Windows 95 or higher or OSX with internet access and a reliable web browser. Participants could have a registered Facebook account but could not have accessed it more than three times independently in the last 6 months, or not have a registered Facebook account at the time of recruitment. Participants were required to commit to meeting approximately 10-20 times during the course of the study for 30-60 min sessions and correspond with the researcher via phone/text/e-mail if necessary.

Two individuals signed consent forms and completed the pre-intervention surveys and assessments but did not qualify due to high scores on the Facebook skill assessment. Four individuals participated in this study. All four scored a 28 or higher on the MMSE. Pearl was a 75-year-old woman who lived with her husband. She had a registered Facebook at the time of recruitment and indicated on the prescreening survey that she used Facebook zero to three times in the past 6 months. Jeanie was a 70-year-old woman who lived by herself. She had a registered Facebook account at the time of recruitment and indicated on the prescreening survey that she used Facebook zero to three times in the past month. Violet was a 78-year-old woman who was widowed and lived by herself. She had a registered Facebook account at the time of recruitment and indicated on the prescreening survey that she used Facebook three to five times in the past 6 months with help from a family member, and less than three times independently. Samuel was a 69 year old man who lived with his wife. He did not have a registered Facebook account at the time of recruitment, and his wife did not either.

Setting

All sessions were conducted in the participants' homes at a computer-desk or kitchen table.

Materials and Equipment

Materials included the participants' computer, and an iPad ® and/or "Jing ®" screen-capturing software that recorded sessions for reliability of the observation system and fidelity of the treatment implementation. Data sheets for data collection (see appendix D), interobserver agreement (IOA), and treatment fidelity were also used (see appendix C).

Target Behaviors and Data Collection

The primary dependent variable in this study was percentage of steps correct per trial on a 7-10 step task analysis (see appendix B). The researcher scored steps of the task as correct or incorrect (omitted errors were counted as incorrect) according to the task analysis, to calculate the percentage correct. The secondary dependent variable was errors of commission, which included extra clicks, scrolls or keystrokes. The researcher tallied errors of commission per each 90-s trial. Data collectors observed the participants' skill attempts in videos. For reliability purposes, two research assistants were trained to score correct or incorrect responses on the task analysis as well as errors of commission with videos of mock-sessions. Research assistants were required to achieve 90% or higher inter-observer agreement (IOA) across three videos. Agreement for the percentage of steps correct was calculated by comparing two observers' data. The number of task items in agreement was divided by the total number of task items and multiplied by 100. Agreement for each participant per condition was as follows: Pearl: baseline 100%, instructions 94% (range 75%-100%), BST 100%, post-training 100%; Jeanie: baseline 95% (range 60-90%), instructions 90% (range 40%-100%), BST 100%, post-training 95% (range 80%-100%); Violet: baseline 97% (range 89%-100%), instructions 92% (range 70%-100%), BST 84% (range 67%-100%), post-training 98% (range 89%-100%); Samuel: baseline 93% (range 80%-100%), instructions 100%, BST 89% (range 78%-100%), post-training 98% (range 80%-100%). Agreement for the errors of commission was calculated by comparing two observers' data. The smaller count was divided by the larger count and multiplied by 100. Agreement for each participant per condition (baseline, instructions, BST, post-training, respectively) was as follows: Pearl: baseline 85% (range 75%-93%), instructions 63% (range 0%-100%), BST 100%, post-training 100%; Jeanie: baseline 66% (range 29%-91%), instructions 41% (0%-100%), 100%, 100%); Violet: baseline 54% (range 33%-90%), instructions 72% (range

0%-100%), BST 67% (range 33%-100%), post-training 71% (range 0%-100%); Samuel: baseline 72% (range 50%-100%), instructions 100%, BST 50% (range 0%-100%), post-training 44% (range 0%-100%).

Experimental Design

A concurrent multiple baseline across behaviors design was used to assess the effectiveness of instructions and BST to teach four seniors Facebook skills.

Procedure

Prior to beginning the study, each participant signed a consent form to participate. Once consent was received, the researcher met with each participant to complete the MMSE, the Geriatric Depression Scale (Yesavage & Sheikh 1986) and the UCLA Loneliness Scale (Russell, Peplau, & Ferguson, 1978). These scales are designed to measure one's subjective feelings of loneliness, social isolation, and depression. The scales were administered before the training, immediately following the completion of training, and four weeks after data collection ends, allowing adequate time for independent use of social media. The researcher examined the participant's computer to assure that it has Windows ® 95 or higher or OS X ®, internet connection, and a reliable web browser (see appendix A). The researcher installed screen-capturing software called "Jing ®," which was removed upon completion of the study.

Because Pearl, Violet, and Jeanie already had Facebook accounts, the researcher changed their passwords and asked them not to recover them until the study was completed. The researcher created a Facebook account for Samuel and did not give him the password. Participants were instructed not to sign on Facebook with any account independently for the duration of the study. Upon the conclusion of the study, the researcher provided them with their account information and debriefed the participants with a short Internet Safety for Seniors

tutorial to inform them about possible risks involved with using the internet and provide them with tips for safe social-networking and reviewed and explained their current Facebook privacy settings with them.

Baseline. The researcher told the participants to complete several multiple-step Facebook skills, one at a time, such as “Upload a picture onto Alison’s timeline.” The researcher gave the participants 90 s to execute each behavior. This trial duration was chosen based on several probes that were conducted with six Facebook-fluent, young adults (ages 23-28). The average time to complete any skill was 34 s, and times ranged from 9 s – 66 s. The trial duration of 90 s was chosen for this study to ensure that older adults with less computer experience have adequate time. During baseline, a participant was required to score below 30% on a minimum of five out of 10 probed Facebook skills (see appendix B) (completed in any fashion), or they were excluded from the study. The researcher selected three of the most essential skills or the three skills on which the participants performed most poorly to target during the study. The skills and/or the order of the skills varied across participants.

Instructions. Because Facebook skills can be task-analyzed and these instructions alone can be readily available and inexpensive, the current study first evaluated the effectiveness of instructions alone on seniors’ acquisition of computer skills. The written task analyses for the three selected Facebook skills was provided to the participants, one task at a time. For each skill, they accessed a task analysis for 3 min. The researcher provided the participant with a statement such as, “You can look over these instructions for a few minutes, then I am going to take them away and see how well you can perform this task.” After 3 min, the researcher removed the task analysis and asked the participant to complete the Facebook skill. The participant was given 90 s to execute the behavior. No feedback from the researcher was provided following the attempt.

This was repeated until three stable data points are present. If the data were stable at 100%, the skill was considered mastered. If the data were stable but below 100%, the researcher began the BST phase the following session. Following stability, the researcher began to teach another Facebook skill.

Post – Training. To assess the participants’ retention of the learned skill, the participants’ Facebook skills were assessed using the same assessment method as the baseline assessment. This was repeated until three stable data points were present. The skill was then continuously assessed through the completion of the study. If the trend was consistently decreasing or below 100%, the researcher began implementation of the BST phase.

BST. The researcher used BST, which includes instructions, modeling, rehearsal, and feedback to teach the unlearned Facebook skills to each participant, individually. To begin the teaching of each skill, the researcher briefly explained the skill’s importance and usefulness with a few sentences. The researcher named the skill and provided the participant with vocal instructions and simultaneously slowly modeled the steps on their computer. Next, the researcher asked the participant to physically rehearse the steps and then immediately provided the participant with a praise statement as well as corrective feedback if necessary. The rehearsal and feedback process was repeated until the participant has executed the behavior correctly two consecutive times. The researcher asked the participant if he/she had any questions, and answered them if applicable. Then, the researcher gave the participant 90 s to perform the skill independently. Following the assessment, the researcher told the participant if he or she was “correct” or “not correct.” If the participant did not achieve 100% accuracy for the skill, the researcher repeated the instructions, modeling, rehearsal, and feedback. This was repeated until he or she met 100% accuracy for the behavior for three consecutive sessions.

Post-training. The participants' Facebook skills were assessed using the same method as baseline assessments. If the trend was consistently decreasing or below 100%, the researcher implemented a booster BST session.

Treatment Fidelity

One research assistant was trained to assess treatment fidelity with videos of mock-sessions. She was required to achieve 90% across three training videos. The research assistant circled “yes” or “no” on a treatment fidelity data sheet to indicate if the researcher performed the behaviors listed in the procedures (see appendix C). If treatment fidelity dropped below 90%, the researcher was required to re-train the implementer with videos of mock sessions until she achieved 90% or higher. Treatment fidelity was assessed for 25% of sessions and was measured at 100% across participants for baseline, 100% across participants for instructions, and 100% for BST for Jeanie and Samuel, 95% for BST with Pearl and 91% for BST with Violet, and 100% across participants in post-training. Treatment Fidelity was not at 100% in the BST phase for Pearl and Samuel due to the instructor not asking the participant “Do you have any questions?” before proceeding to the assessment. In some cases, the participant asked a question without the instructor's invitation.

CHAPTER 3:

RESULTS

Figure 1 shows the percentage of correct steps for three Facebook skills across baseline, instructions, and BST for Pearl. For Pearl, instructions alone produced a slight but variable increase in percentage of correct steps. With BST, she responded at mastery level immediately and consistently across three trials for all three skills. A booster session was implemented in post-training at trial 13 for skill one (Search and Request a Friend) and her responding continued to vary from trials 17-19 but returned to mastery level at trial 20, then stabilized. For Pearl, instructions alone was not an effective means to teach novel Facebook skills. Figure 2 shows the frequency of errors of commission for Pearl across baseline, instructions, BST, and post-training. While the frequency decreased in the instructions phase for all three skills, the most substantial decrease in frequency was observed in the BST phase for all skills. Jeanie completed Send a Private Message (skill one) with instructions alone, but once the instructions were removed in post-training, her high responding did not maintain (see Figure 3). It is possible that generalization occurred in skill three, as seen by the gradual increase in correct steps in baseline and then in instructions. Regardless, BST was necessary for Jeanie to reach mastery level for all three skills. Figure 4 shows the frequency of Jeanie's errors of commission. Jeanie made errors of commission in baseline, instructions, and in the first post-training in skill one but not during BST. She made very few errors in post-training following BST. Violet had low levels of responding in baseline for the first two skills and variable responding with a slightly increasing trend for skill three (Figure 5). Her responding continued to be variable when instructions were

implemented for skill three, but the level slowly increased, possibly due to generalization. Skill three shared topographical similarities to skill one. Violet achieved 90% but completed the terminal goal in skill one trials 16-18 by clicking a functionally equivalent link instead of the link indicated in the task analysis. The researcher retrained her with a booster BST session at trial 19, but the next session she went back to responding with her functionally equivalent link. Interestingly, several trials later she changed back to the taught way without any prompts. Overall, BST resulted in a substantial increase for two out of the three skills but was not required for the third due to generalization. Violet's errors of commission were at moderate to high levels during baseline and instructions and low levels during BST and post-training (Figure 6). Samuel mastered the first two skills in the instructions phase, but his score decreased in post-training for skill two. It is possible that generalization occurred in skill three seen by the gradual increase in score over time. The pattern of Samuel's frequency of errors of commission was similar to the previous participants in that the level was lowest during and following BST. This finding indicates that not only is BST effective for teaching participants to execute the correct steps, but effective at limiting the number of errors a senior-novel-Facebook user makes, resulting in a more fluent social-networking experience.

Jeanie, Violet, and Samuel indicated on the social validity questionnaire that they "strongly agreed" with the statements "I liked using the task analysis", "The task analysis was easy to understand," and "The task analysis helped me improve my Facebook skills" – Pearl only "agreed" with these statements. All four participants "strongly agreed" with the statements "I enjoyed participating in this study," "I liked learning with Behavioral Skills Training," "Behavioral Skills Training was easy to follow," "Behavioral Skills Training Improved my

Facebook skills,” “I prefer the personal interaction BST provides versus and instructions only approach,” and “I plan to continue to use Facebook after the study concludes.”

When administering the final scales, the researcher asked the participants to self-report how many times they used social media since the completion of the study about four weeks earlier. Pearl and Jeanie reported that they now use Facebook at least once a day, showing a substantial increase in use, while Violet indicated that she had used Facebook about six times in the four weeks following the study’s completion, showing a less-dramatic, yet considerable increase. Samuel estimated that he had used Facebook 20 times since gaining full access to his account, and proudly displayed a profile picture that he uploaded independently.

Pearl’s score on the Geriatric Depression scale decreased over time, with scores of 4, 3, and then 1. No substantial change was seen in Jeanie or Violet’s scores; Jeanie’s score remained a 1, and Violet’s score was measured at 0, 1, and 1. Samuel’s score remained a 0 across all three assessments. Fifteen points total are possible, and a score greater than 5 points is suggestive of depression (Greenberg, 2012). None of the participants achieved a score that suggested they may have been experiencing depression.

Jeanie’s score on the UCLA Loneliness Scale decreased over time. Her first score was 3, then 2, then 0. Pearl’s scores remained stable at 1, and Violet’s scores were 5, 8, and 5. Samuel’s scores were 0, 0, and then 2. The highest score possible is 60, and the lowest score 0. The mean normative score for adults ages 60-89 from one general population health survey was found to be 28.96 (Knight et al. 1998). Because all four participants scored so low on both the GDS and the UCLA Loneliness Scale initially, it is possible that the lack of variation was due to a floor effect.

CHAPTER 4:

DISCUSSION

The data from all four participants suggest when instructions alone are not effective for teaching seniors novel Facebook skills, BST can be supplemented to achieve mastery. The results from Jeanie and Samuel indicate that as seniors become more familiar with navigating Facebook, they may learn other novel skills more easily. Samuel learned and maintained skill one without any social feedback, indicating that the inherent feedback provided by Facebook may be sufficient in some situations, possibly depending on the complexity of the skill. All four participants experienced sporadic decreases in scores during post-training in at least one skill but returned to mastery level in the following trial without instructor feedback. Sometimes they would vocally report statements like “That wasn’t it,” or “I did it wrong” at the end of the trial, indicating that the feedback provided by the instructor paired with the feedback produced by Facebook following skill completion during BST created a lasting effect.

It was important to measure errors of commission because engaging in erroneous computer behaviors may limit fluency when learning a new skill. All four participants made substantially more errors of commission when using instructions to attempt the skill as opposed to BST, and three out of four participants made less errors of commission on average per trial in post-training following BST, than in post-training following instructions.

Although the previous literature points to decreases in depression and loneliness following computer training, all four participants in the current study initially scored extremely low on both the GDS and the UCLA Loneliness Scale, so it is possible that the lack of variation

was due to a floor effect. All four participants lead active lifestyles, often participating in church groups, bridge games, dinner outings, and volunteer work, therefore it may be that they were unlikely to suffer from depression or loneliness.

The results seen in the current study may be unique to the senior population. Adults younger than 65 years old may be more likely to have previous experience with computers, and may therefore be more comfortable with using a task analysis independently. The Facebook skill explanation along with the social feedback included in the BST package seemed to be an important component in the participants' overcoming their own apprehension in participating in social media. As reported in the literature, feelings of uncomfortableness (Van Volkom et al., 2014) and frustration with computer use were often observed. Three of the participants in the current study were observed to be apprehensive throughout the learning process, particularly in the baseline and instructions phases. Jeanie reported that in the past she often felt too nervous to use Facebook alone, in fear that she would make a mistake that she couldn't fix. She said that one time she accidentally deleted a message a friend sent her, which caused her great distress. During baseline assessments, Pearl and Violet often became frustrated with their laptops. They would make statements such as "I hate this thing," and "I want to throw this thing out the window," when facing difficulties during the trials. When learning novel, complex skills like the ones performed in social networking and experiencing feelings of apprehension and trepidation, it is especially important to have an experienced instructor to provide both corrective and positive feedback. Improved instructions (with added pictures and definitions) may be beneficial but still do not include the necessary corrective feedback for the situations in which a mistake is made. Future research should include evaluations of the effectiveness of BST to teach social networking in a dyad or group setting. If proven effective, this could increase accessibility to

more consumers. Other ideas include investigating the amount of BST sessions necessary to teach a computer skill to mastery so a booster session (which may not be accessible in real-world computer classes) is not needed.

It is noteworthy that the open-ended reports from the social validity questionnaire showed that three of the participants preferred the BST intervention, particularly the personal interaction component. Pearl reported that she liked “the personal interaction” the most, and “trying to understand the first method of teaching” was her least-liked part. Jeanie wrote that she liked “studying written instructions for three minutes” the least, and the interaction with the instructor the most. Violet liked “the instructor’s personal applications, kindness, and patience with student.” but disliked her “inability to be patient with herself.” Samuel wrote that the study was “not threatening – easy to follow.” and that he liked “nothing” the least.

One major obstacle that all participants faced was trying to understand Facebook culture as they learned the skills, specifically the terminology and etiquette. The instructions intervention in this study did not include explanations of the skills’ importance or function, so most of the participants reported being very relieved (yet often still puzzled) when they were told what the skill meant in the BST phase. The behavior of “tagging” someone in a “status” is an example of one of the novel activities. The fact that currently “status” doesn’t mean “single,” “married,” or “widowed,” may have accounted for a lack of stimulus control. It is suggested that future interventions include similar skill explanations or even definitions of common Facebook terms. It is recommended that trainers utilize BST with all of its components to provide seniors with a thorough, effective, and likeable training method.

A limitation for data collectors was discriminating individual scrolls and computer clicks on the videos recorded with Jing ®. Jing ® captures screenshots of the user’s trial and does not

allow the observer to view the participant engaging in the response or hear any clicking or typing. For example, when a user hovers their mouse over a link on the Facebook webpage, sometimes a text box appears or the font of the word changes, making it difficult for the data collector to determine if the user engaged in a click (error of commission) or not. When participants scrolled up and down on the webpage using the wheel on their mouse, it was challenging for observers to determine the onset and offset of one error to the next. These difficulties may account for the differences in scoring of errors of commission between data collectors. Due to computer issues, a few of Violet's sessions were recorded with the I Pad ®, but these trials were actually more difficult to observe due to the distance and the clarity of the screen. Research assistants were trained with mock-videos of the researcher attempting Facebook skills. One suggestion is to record sessions of a novel Facebook user attempting the skills and train with those instead, to better prepare for the unique and complicated behaviors seen during the actual assessments.

It is important to include safety training when teaching seniors' new social networking skills to caution against what could be potentially dangerous behavior. For example, one participant wanted to post pictures about her morning walk. She was cautioned to not include anything too location-specific, because although she thought she knows and trusts all her Facebook friends, one should always be careful not to give away too much information. Throughout the intervention the researcher often checked the anti-virus that was already installed on each participant's computer and explained what she was doing each time to help familiarize them with the software and the potential threats. After the safety training presentation, the researcher also attempted to access each participant's Wi Fi with her cell phone, and showed them that their Wi Fi was password protected to prevent strangers from using their connection.

Ideally, senior computer-users should have someone they trust that they can call when faced with unusual and difficult computer situations beyond the duration of computer classes and trainings.

Pearl's Facebook Skills

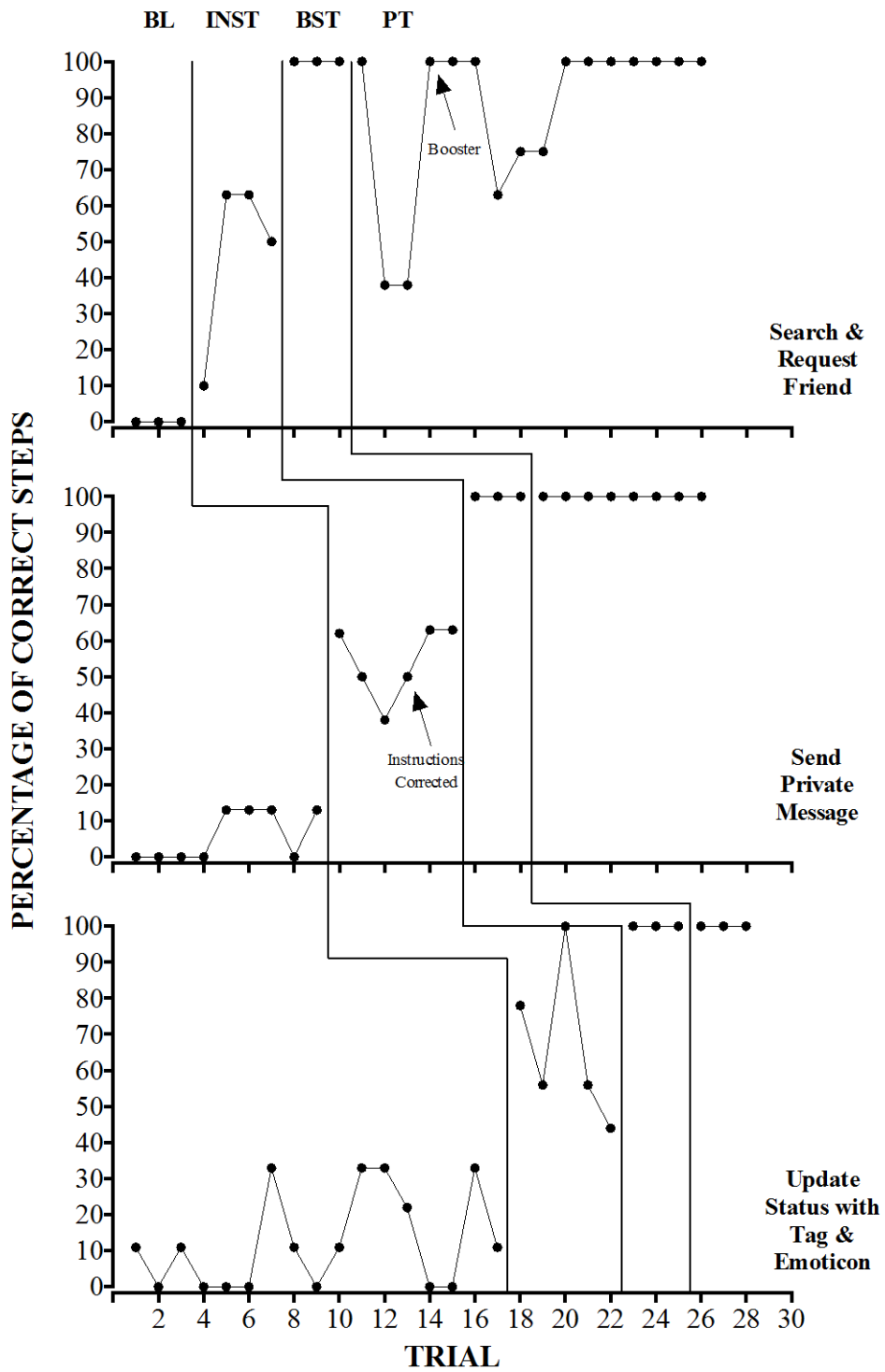


Figure 1: Percentage of correct steps for Pearl across baseline, instructions, BST, and post-training.

Pearl's Errors of Commission

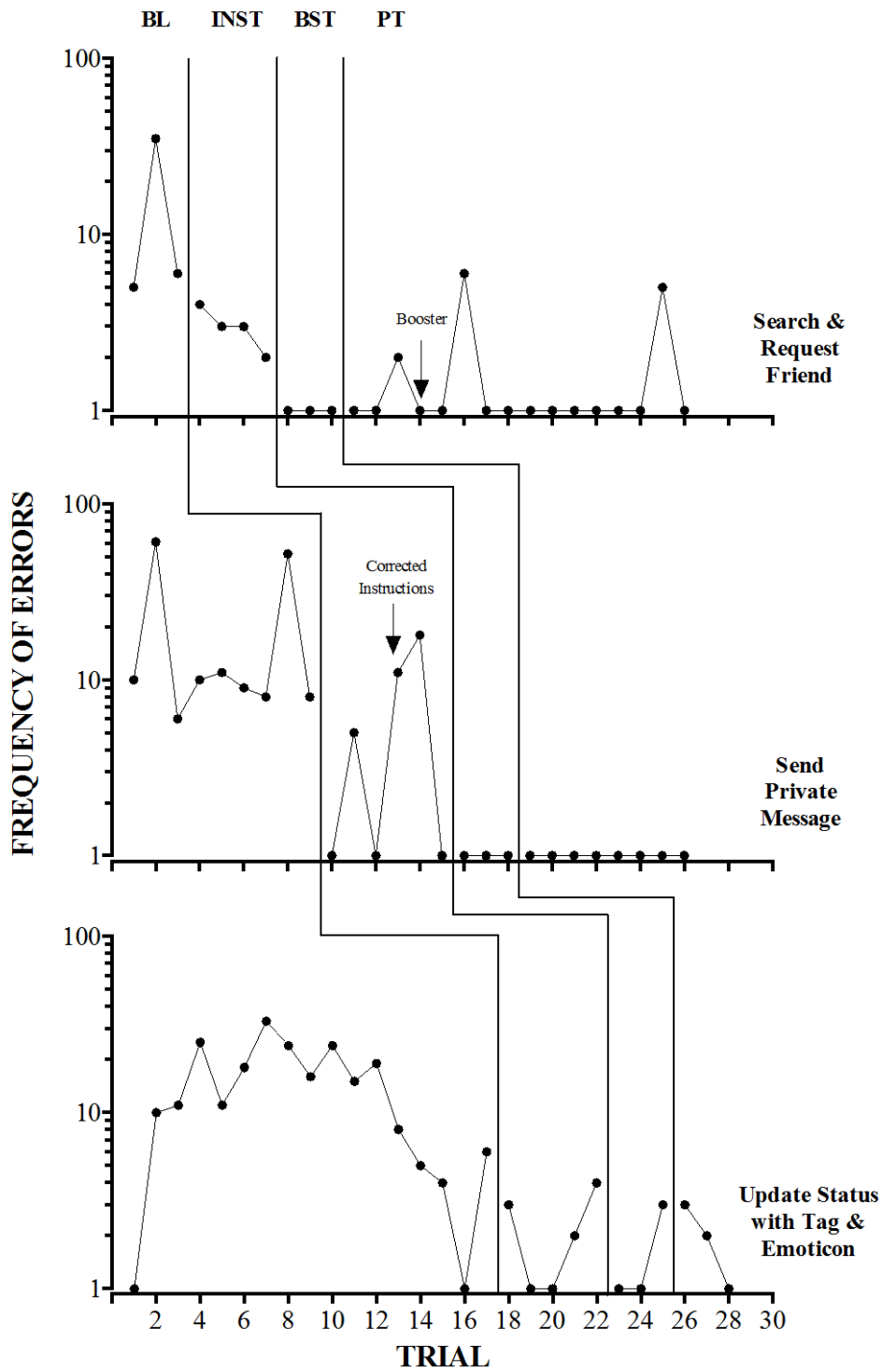


Figure 2: Frequency of errors of commission per 90-s trial for Pearl across baseline, instructions, BST, and post-training.

Jeanie's Facebook Skills

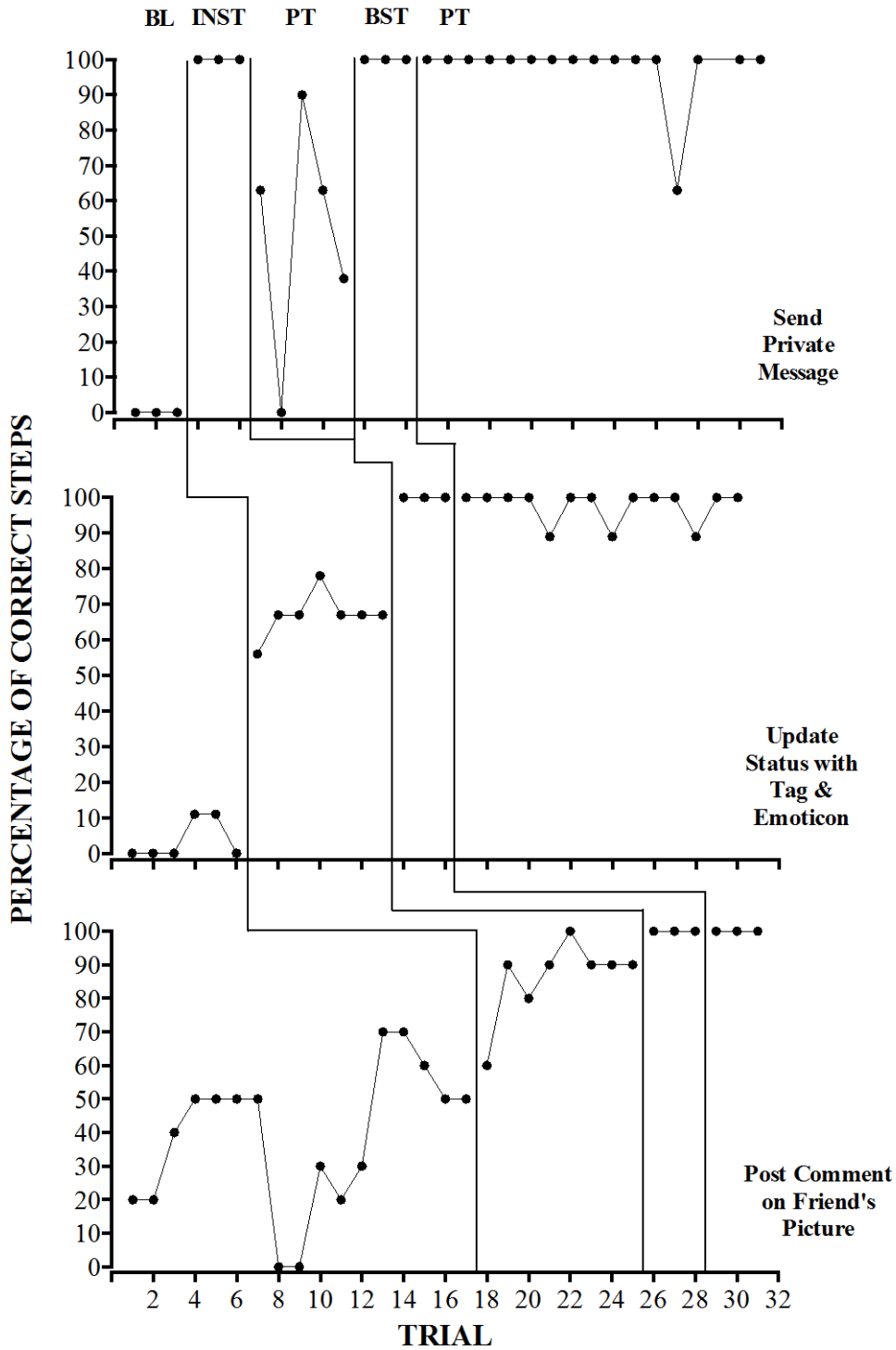


Figure 3: Percentage of correct steps for Jeanie across baseline, instructions, BST, and post-training.

Jeanie's Errors of Commission

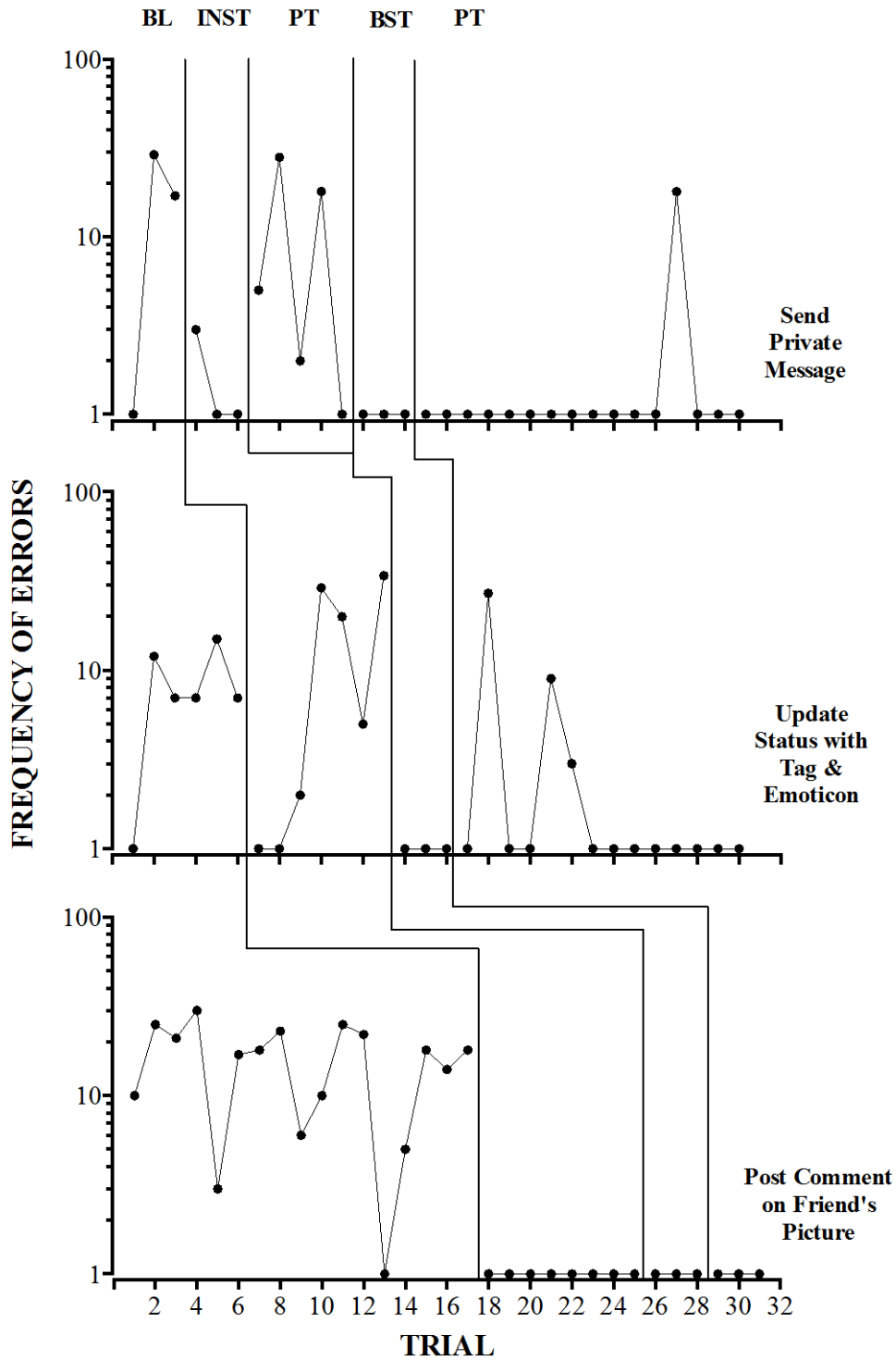


Figure 4: Frequency of errors of commission for Jeanie across baseline, instructions, BST, and post-training.

Violet's Facebook Skills

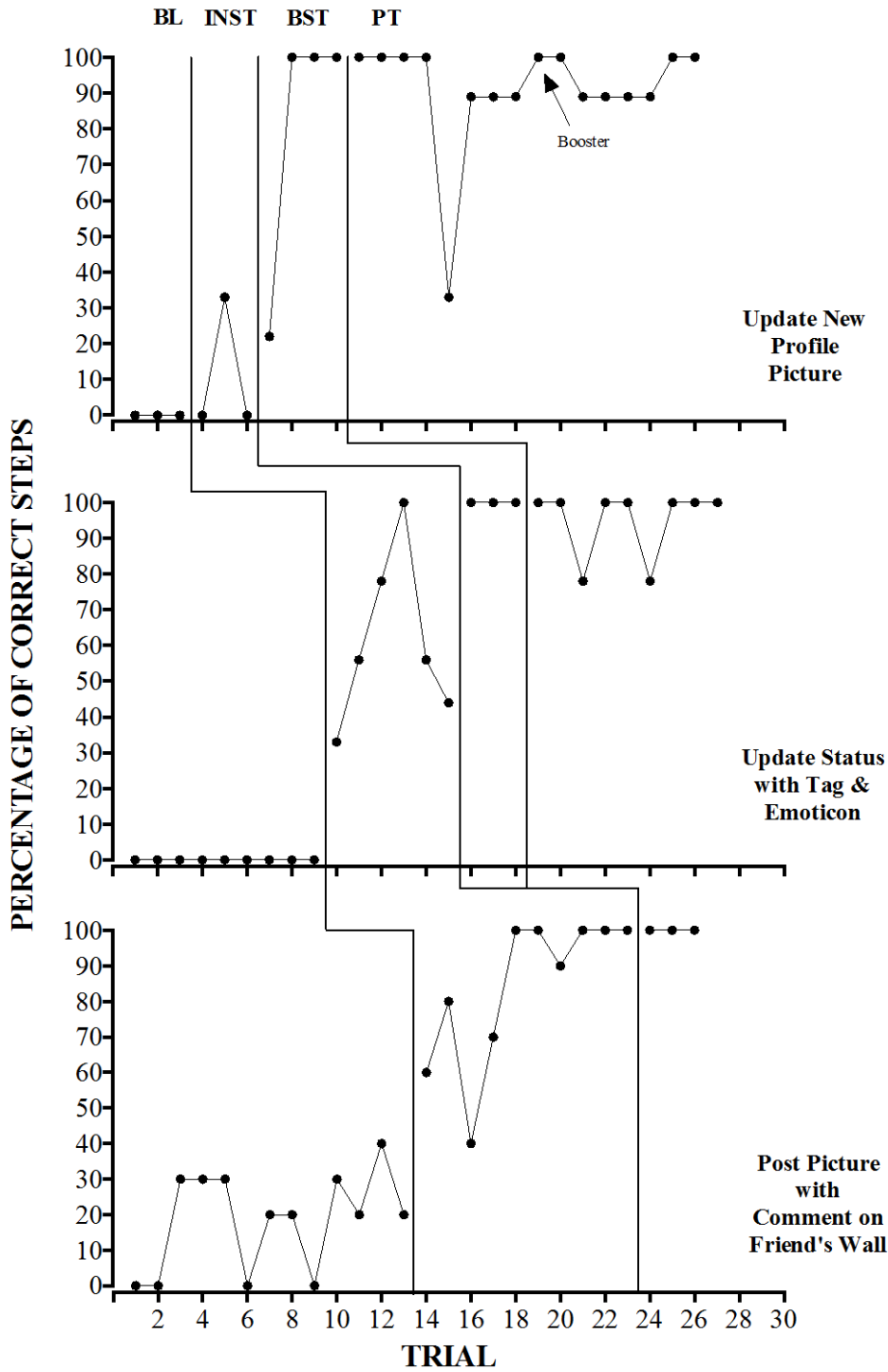


Figure 5: Percentage of correct steps for Violet across baseline, instructions, BST, and post-training.

Violet's Errors of Commission

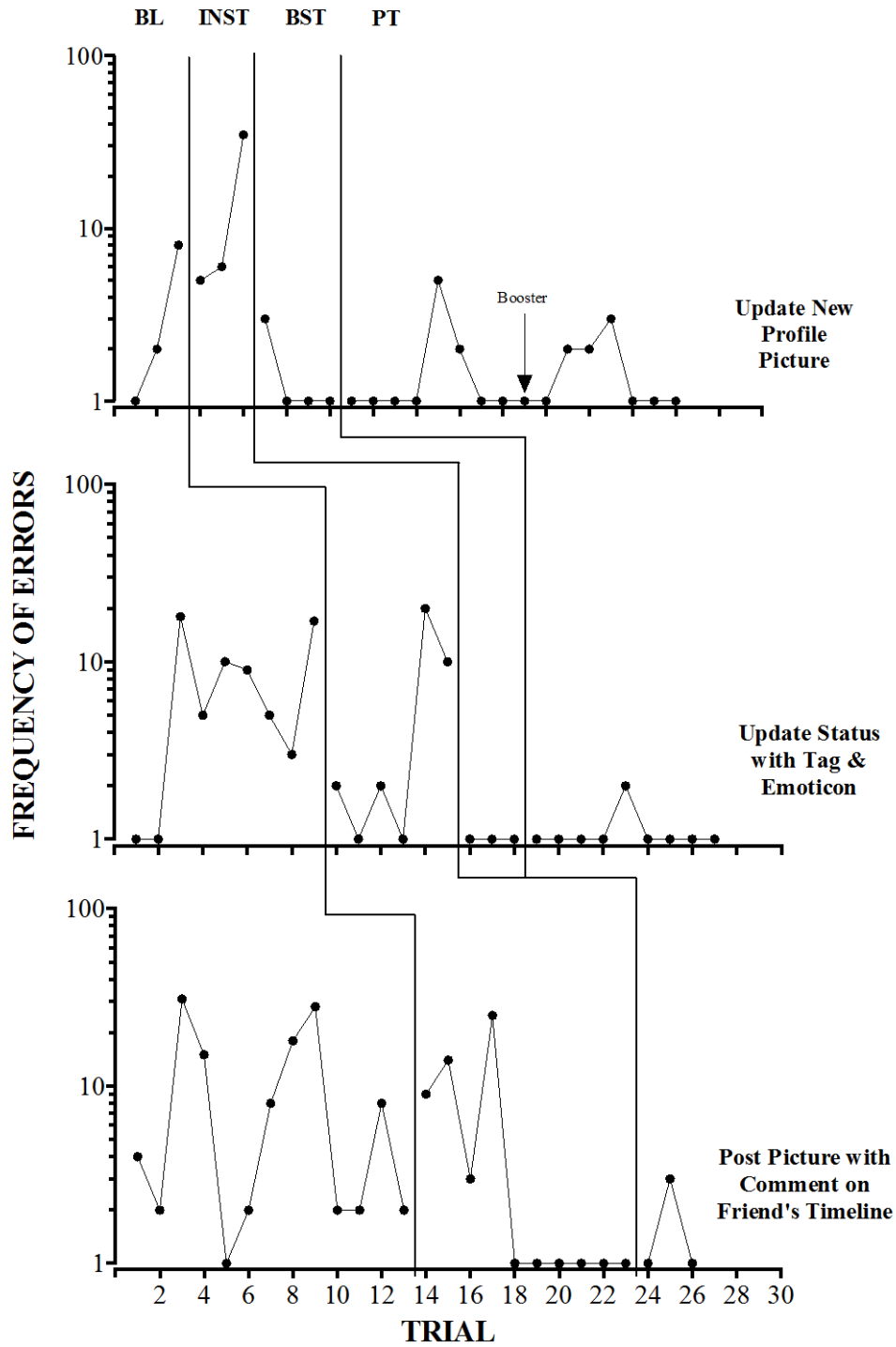


Figure 6: Frequency of errors of commission for Violet across baseline, instructions, BST, and post-training.

Samuel's Facebook Skills

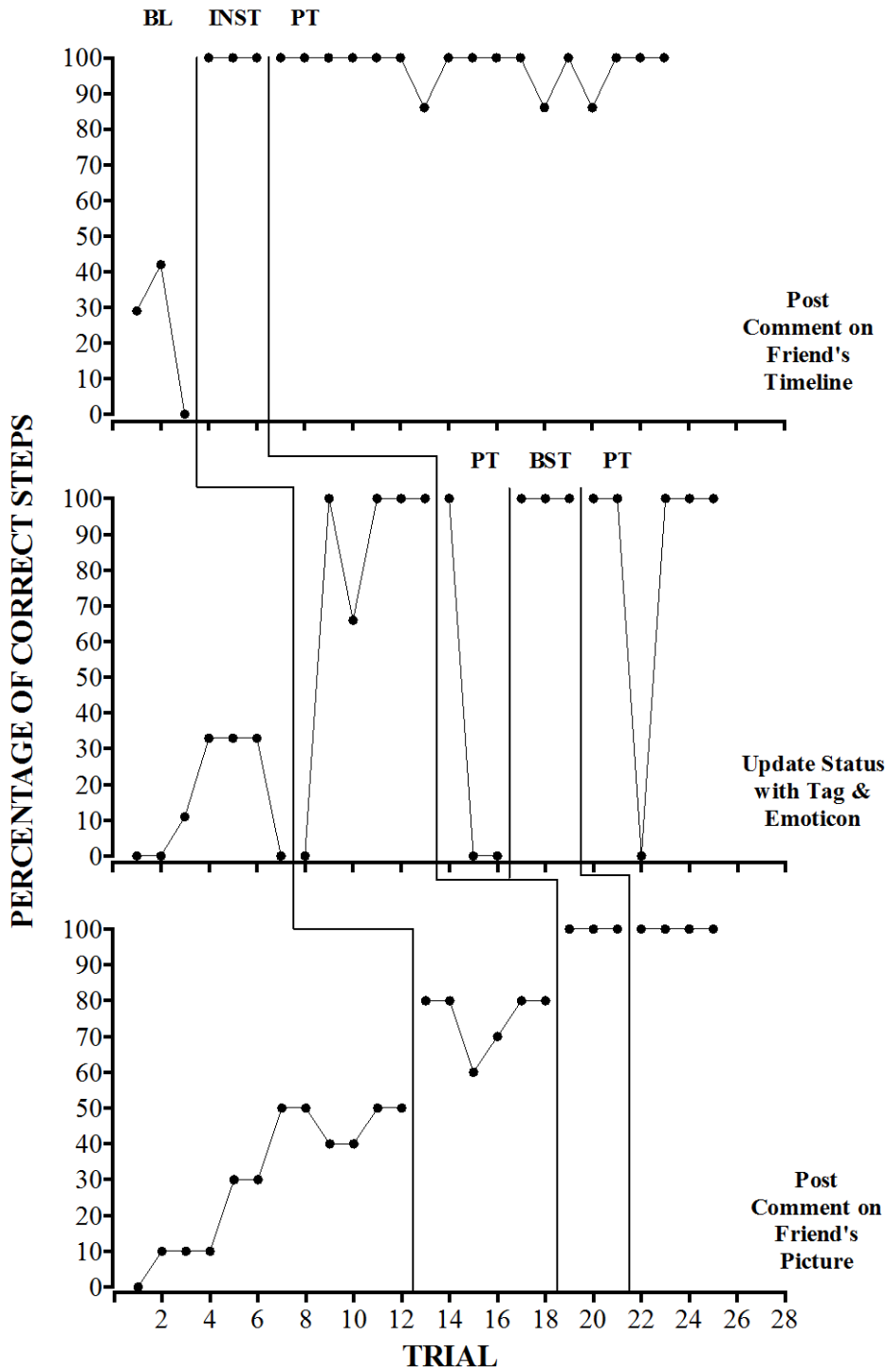


Figure 7: Percentage of correct steps for Samuel across baseline, instructions, BST, and post-training.

Samuel's Errors of Commission

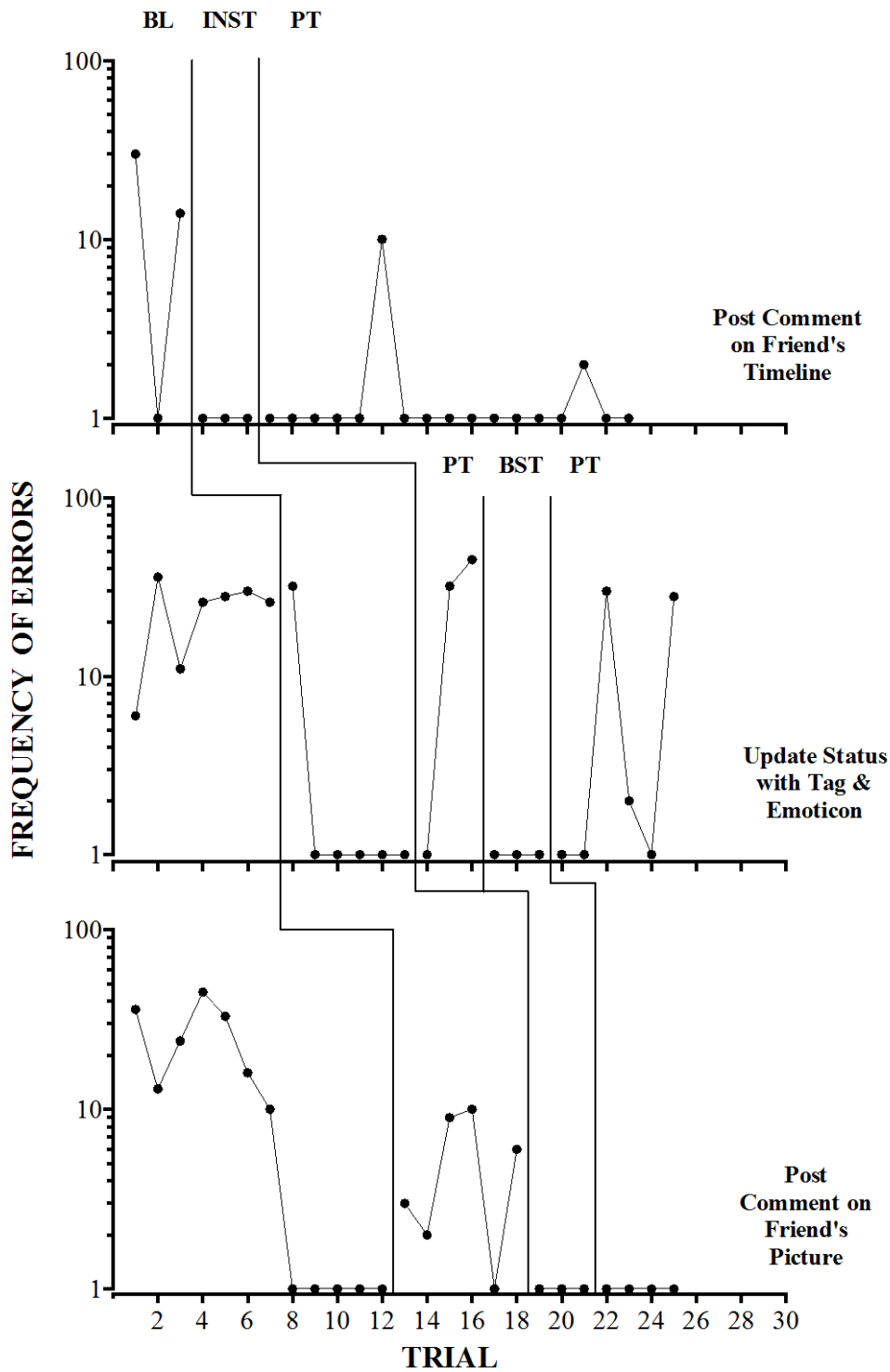


Figure 8: Frequency of errors of commission for Samuel across baseline, instructions, BST, and post-training.

CHAPTER 5:

REFERENCES

- Campbell, R. J., Nolfi, D. A. (2005). Teaching elderly adults to use the internet to access health care information: Before and after study. *Journal of Medical Internet Research*. 7(2). doi: 10.2196/jmir.7.2.e19
- Cavanaugh, J. C., Blanchard-Fields, F. (2011). *Adult development and aging*. Belmont, CA: Wadsworth.
- Cody, M. J., Dunn, D., Hoppin, S., Wendt, P. (1999). Silver surfers: Training and evaluating internet use among older adult learners. *Communication Education*.48, 269-286. doi: 10.1080/03634529909379178
- Cotton, S. R., Ford, G., Ford, S., & Hale, T.M. (2012). Internet use and depression among older adults. *Computers in Human Behavior*. 28, 496-499. doi: 10.1016/j.chb.2011.10.021
- Cotton, S. R, Ford, G., Ford, S., Hale, T. M. (2014). Internet use and depression among retired older adults in the United States: A longitudinal analysis. *Journals of Gerontology*. 69, 763-771. doi: 10.1093/geronb/gbu018
- Echt, K. V., Morrell, R. W., Park, D. C. (1998). Effects of age and training formats on basic computer skill acquisition in older adults. *Educational Gerontology*, 24, 3-25.
- Fetherston, A. M., & Sturmey, P. (2014). The effects of behavioral skills training on instructor and learner behavior across responses and skill sets. *Research in Developmental Disabilities*, 35, 541-562. doi: 10.1016/j.ridd.2013.11.006

- Folstein, M., Folstein, S.E., McHugh P.R. (1975). "Mini-Mental State" a practical method for grading the cognitive state of patients for the clinician. *Journal of Psychiatric Research*, 12, 189-198. doi:10.1016/0022-3956(75)90026-6
- Gatheridge, B. J., Miltenberger, R. G., Huneke, D. F., Satterlund, M. J., Mattern, A. R., Johnson, B. M., & Flessner, C. A. (2004). Comparison of two programs to teach firearm injury prevention skills to 6- and 7- year-old children. *Pediatrics*, 114, 294-299. doi: 10.1542/peds.2003-0635-L
- Gilly, M. C., Celsi, M. W., & Schau H. J. (2011). It don't come easy: overcoming obstacles to technology use within a resistant consumer group. *The Journal of Consumer Affairs*. 62-89. doi: 10.1111/j.1745-6606.2011.0128.x
- Gist, M., Rosen, B., Schwoerer, C. (1988). The influence of training method and trainee age on the acquisition of computer skills. *Personel Psychology*, 41, 225-265.
- Graudins, M. M., Rehfeldt, R. A., DeMattei, R., Baker, J. C., Scaglia, F. (2012). Exploring the efficacy of behavioral skills training to teach basic behavior analytic techniques to oral care providers. *Research in Autism Spectrum Disorder*, 6, 978-987. doi: 10.1016/j.rasd.2011.12.010
- Greenberg, S. A., (2012). The geriatric depression scale (GDS). *Hartford Institute for Geriatric Nursing, New York University, College of Nursing*, 4.
- Himle, M. B., & Wright, K. A. (2014). Behavioral skills training to improve installation and use of child passenger safety restraints. *Journal of Applied Behavior Analysis*, 47, 549-559. doi: 10.1002/jaba.143

- Hollis-Sawyer L. A., & Sterns, H. L. (1999). A novel goal-oriented approach for training older adult computer novices: Beyond the effects of individual-difference factors. *Educational Gerontology, 25*, 661-684.
- Howden, L. M., & Meyer, J. M. (2011). Age and Sex Composition: *U.S. Census Bureau*.
- Knight, R. G., Chisholm, B. J., Marsh, N. V., & Godfrey, H. D. (1998). Some normative, reliability, and factor analytic data for the UCLA loneliness scale. *Journal of Clinical Psychology, 44*, 203-206.
- Lagana, L. (2008). Enhancing the attitudes and self-efficacy of older adults towards computers and the internet: results of a pilot study. *Educational Gerontology, 34*, 831-843. doi: 10.1080/03601270802243713
- Lee, B., Chen, Y., Hewitt, L. (2011). Age differences and constraints encountered by seniors in their use of computers. *Computers In Human Behavior. 27*, 1231-1237. doi: 10.1016/j.chb.2011.01.003
- Loboprabhu, S. & Molinari, V. (2012). Severe loneliness in community-dwelling aging adults with mental illness. *Journal of Psychiatric Practice, 18*, 20-28. doi: 10.1097/01.pra.0000410984.15852.5
- McMurtrey, M. E., Downey J. P., Zeltmann S. M., McGaughey R. E. (2011). Seniors and technology: Results from a field study. *Journal of Computer Information Systems, 51*(4) 22-30.
- Miltenberger, R. G. (2008). *Behavior modification: Principles and procedures*. Belmont, CA: Wadsworth.

- Muir, N. C., & Criddle, L. *Using the internet safely for seniors for dummies*. Retrieved from www.dummies.com/how-to/content/using-the-internet-safely-for-seniors-for-dummies-.html
- Pelgrin, W. F. (2013, June). *Keeping senior citizens safe online*. Retrieved from <http://msisac.cisecurity.org/newsletters/2013-06.cfm>
- Plaster, M. J. (2014), Feb 28). *6 safety social networking tips for seniors*. Retrieved from <http://www.lifelinesys.com/content/blog/seniors/independent-living/6-safety-social-networking-tips-for-seniors>
- Raine, L., Smith, A., Duggan, M. (2013). Coming and going on Facebook. *Pew Research Center's Internet & American Life Project*. Washington, DC: Author.
- Russel, D. (2009). Living arrangements, social integration, and loneliness in later life: The case of physical disability. *Journal of Health and Social Behavior*, *50*, 460-475.
- Russell, D, Peplau, L. A. & Ferguson, M. L. (1978). Developing a measure of loneliness. *Journal of Personality Assessment*, *42*, 290-294.
- Sanders, M. J., O'Sullivan, B., BeVurra, K., Fedner, A. (2013). Computer training for seniors: An academic-community partnership. *Educational Gerontology*, *30*, 179-193. doi: 10.1080/03601277.2012.700816
- Sharpira, N., Barak, A., & Gal, I. (2007). Promoting older adults' well-being through internet training and use. *Aging and Mental Health*. *11*, 477-484. doi: 10.1080/13607860601086546
- Shayne, R. & Miltenberger, R. G. (2013). Evaluation of behavioral skills training for teaching functional assessment and treatment selection skills to parents. *Behavioral Interventions*, *28*, 4-21. doi: 10.1002/bin.1350

- Shedletsky, L. (2012). Undergraduates mentoring older adults: Breaking stereotypes. *Journal of Intergenerational Relationships, 10*, 400-414. doi: 10.1080/15350770.2012.726599
- Smith, N. I. R. (2012). Teaching computer skills to senior citizens: A library assistant's learning experience. *Georgia Library Quarterly, 49*, 34-37.
- U.S. Department of the Health and Human Services, Administration on Aging, Administration for Community Living. *A Profile of Older Americans: 2012*. Retrieved from <https://www.census.gov/popest/data/>
- Van Volkom, M. V., Stapley, J. C., & Amaturro, V. (2014). Revisiting the digital divide: Generational differences in technology use in everyday life. *North American Journal of Psychology, 16*, 557-574.
- White, H., McConnell, E., Clip, E., Bynum, L., Teague, C., Navas, L.,...Halbrecht, H. (1999). Surfing the net later in life: A review of the literature and pilot study of computer use and quality of life. *Journal of Applied Gerontology, 18*, 358-378. doi: 10.1177/073346489901800306
- Yesavage, J. A., & Sheikh, J. I. (1986) 9/Geriatric depression scale (GDS) recent evidence and development of a shorter version. *Clinical Gerontologist, 5*, 165-173, doi: 10.1300/J018v05n01_09

CHAPTER 6:
APPENDECIES

Appendix A: Study Eligibility and Pre-Screening Consent

1. Do you own or have daily access to a desktop computer with internet access? yes no
2. Does your computer have Windows ® 95 or higher OR OS X ®? yes no
3. Do you have any of the following web browsers? (circle all that apply)
Google Chrome ™ Firefox ® Internet Explorer ® Safari ®
4. Do you currently have a Facebook account? yes no
If yes, approximately when was the last time you used it? _____
If yes, how many times (per month) do you use it? 0-3 3 or more
5. Have you taken a computer class in the past six months? yes no
6. Are you motivated and interested in learning to use social media, particularly Facebook?
yes maybe no
7. Can you commit to meeting at least 10 times during the course of the study for approximately 30 minutes?
yes no
8. Do you have plans for vacation or are you planning on traveling in the next 4 months?
yes no
9. If chosen for this study, do you consent to the researcher installing Jing® screen capture software for data collection purposes? This will be used only to record your mouse-clicks and typing during assessment, and will otherwise be turned off on your computer.
yes no

Signature

Appendix B: Target Skills

Update Status

1. Click **Home** at the top right of your screen
2. Put cursor over the words **What's on your mind?** then click over the words
3. Type "I'm learning to use Facebook"
4. Click **Post**

Update Profile Photo

1. Click **your name** on the top right of the browser
2. Click the **camera icon** in the bottom left corner of your current profile picture
3. Click **Upload Photo**
4. Click **Pictures / My Photos / etc.**
5. Click your photo of choice
6. Click **Open** on the same box
7. Put cursor over picture
8. Click and hold to move the picture around to where you want it
9. Click **Crop and Save**

Post a Comment on a Friend's Wall

1. Click **Home**
2. In the white bar at the top of your page, click over the words, "**Find friends**"
3. Type "**Alison O'Connell PI**"
4. In the white box towards the left of your screen, click over the words "**Write something...**"
5. Type "**Hello, friend!**"
6. Click **Post**

Send a Private Message

1. Click **Home**
2. On the left hand side of your page near the top, click **Messages**
3. Click the box that says + **New Message**
4. Next to "**To:**" click over the word "**Name**"
5. Type the person's first name. Finish completely typing the person's name OR click their name from the drop down box when it appears
6. Click over the words "**Write a message...**"
7. Type something like, "**Hello, How are you doing today?**"
8. Click **Send**

Note: #4 was changed to, If your cursor isn't blinking, click next to the word "To:" For participant 1 on session 13 due to the word "Name" not appearing on her screen.

Search and Request a Friend

1. On the top of your Facebook screen, click **Find Friends** in the white bar
2. Type "**Alison O'Connell PI**"
3. Next to **Alison O'Connell PI**, click the ... drop down box

4. Click **Photos**, and view the photos to verify that this is indeed the friend you are looking for
5. Click the **back arrow** ← at the top left of your web browser
6. Next to **Alison O’Connell PI**, Click **Add Friend**

Change Who Can See Your Stuff

1. Click **Home**
2. Click the small Lock icon at the upper right hand corner of the Facebook screen
3. Click **Who can see my stuff?**
4. Under **Who can see my future posts?** click the drop down box and make sure **Friends** is selected
5. Click **More Options**
6. Click **Custom**
7. Click over the check mark in the box next to the text **Friends of tagged** so that the box becomes unchecked
8. Click **Save Changes**
9. Click **Home**

Post a Picture with a Comment on a Friend’s Wall

1. Click **Home**
2. In the white bar at the top of your page, click over the words, “**Find friends**”
3. Type **Alison O’Connell PI**
4. In the box towards the right, click **Photo / Video**
5. Click the + in the middle of the dotted box
6. Click the chosen photo
7. Click open on the same box
8. After your picture appears, click over the text **Say something about this photo...**
9. Type “**My favorite place**”
10. Click post

Post a Comment on a Friend’s Picture

1. In the bar at the top of your page, click over the words, “Find Friends”
2. Put your cursor in the white box inside the blue bar and click
3. Type Lily Ann Summers and press enter or begin typing the name until you see her name appear on the drop down box and click
4. In the middle of your screen, click photos
5. Scroll down
6. View Lilly’s photos, and click one that you like
7. Click over the words, “Write a comment...”
8. Type a comment such as “**How Nice**”
9. Press enter on your keyboard to post
10. Click the dark grey arrow in the right hand corner to stop viewing the picture

Respond to a Private Chat with Text and a File

1. When the chat box appears, click on white area at the bottom of the box
2. Type “**Yes, let me find it for you**”
3. Press the **enter** key on your keyboard
4. Click the gear icon at the top of the chat box

5. Click **Add Files**
6. Towards the left of the smaller box, find and click **Desktop**
7. Click the file named **”Cookie Recipe”**
8. Click **Open**
9. Press the **enter** key on your keyboard

Update Status with Tag and Emoticon

1. Click **Home** at the top right of your screen
2. Put cursor over the words **What’s on your mind?** then click over the words
3. Type a phrase such as, “I’m learning to use Facebook” or “What a beautiful day”
4. Click the icon under your words that is a **shadow of a person with a + sign**
5. Type **“Lilly Ann Summers”** and press **enter** OR **begin typing “Lilly Ann…”** and click **her name when it appears.**
6. Click the **smiley face icon**
7. Click **Feeling (or Thinking, etc.)**
8. Press the down arrow on your keyboard until you find a feeling, such as **Proud**, then click it
9. Click **Post**

Create an Event

1. Click **Home**
2. Click **Create Event** at the lower left of your screen, under **EVENTS**
3. Next to **Name** click over the words **“ex: Birthday Party,”** then type **“Pot-luck Dinner Party”**
4. Next to the title **Details** click over the words **“Add more info,”** then type **“Bring a homemade dish to share. Drinks and games will be provided.”**
5. Next to **Where** click over the words **“Add a place?”** then type **“123 Main Street”**
6. Next to **When** Click the calendar Icon to chose the date, **“10/10/15”**
7. Put your cursor over the words **Add a time** then type, **“5:00 pm”**
8. Uncheck the box that indicates Guests can invite friends by **clicking over the check-mark**
9. Click **Create**

Like New Pages, Check Invites, and View Liked Pages

1. Click **Home**
2. On the left hand side of your screen, under **Pages** click **Like Pages**
3. View the pictures on the page until you find an interest. Under that picture, click **Like**
4. At the top of the page, click **Invites** to view your invites
5. At the top of the page, click **Liked Pages** to view your liked pages
6. Click **Home**

Add a Life Event

1. Click **Your Name** at the top right of your screen
2. Click **Life Event** on the blue and white box near the top-middle of your screen
3. Click **Travel and Experiences**
4. Click **Started a Hobby**
5. Next to **Hobby**, click over **Optional** and type **“Social Networking”**

6. Next to **When**, click **Add month**
7. Click the current month
8. Next to **Story**, click over **Optional** and type “**Looking forward to connecting with others**”
9. Click **Save**

Appendix C: Treatment Fidelity

BL / PT

Video Label: _____

Instructor told the participant the name of the skill and asked them to attempt skill.

yes no

Participant attempted to independently execute the skill.

yes no

Instructor did not give the participant any feedback regarding correctness of the performance.

yes no

Total yes = _____ / 3 = _____ %

Instructions

Instructor provided the participant with the task analysis for three minutes. yes no

Participant was asked to attempt to execute the skill without the task analysis. yes no

No feedback regarding correctness was given by the instructor. yes no

Total yes = _____ / 3 = _____ %

BST

Instructor read instructions of all steps listed in the task analysis. yes no

Instructor modeled the correct execution of the skill on the participant's computer so that the participant could clearly see each step. yes no

Participant was asked to rehearse the correct execution of the skill. yes no

Instructor gave the participant one or more praise statements, followed by one or more corrective feedback statement if errors were made. yes no

Participant was provided the opportunity to rehearse the correct execution of the skill for a second time. yes no

Instructor gave the participant one or more praise statements, followed by one or more corrective feedback statements if errors were made. yes no

Appendix D: Data Collection Sheet

Participant/Video #: _____ Scored by: _____ Date: _____

Update Status with Tag and Emotion	Correct + or Incorrect -	Errors of Commission
1. Click Home at the top right of your screen		
2. Put curser over the words What's on your mind? then click over the words		
3. Type a phrase such as "I'm learning to use Facebook" or "What a beautiful day"		
4. Click the icon under your words that is a shadow of a person with a + sign		
5. Type "Lilly Ann Summer" and press enter or begin typing Lilly and click her name		
6. Click the smiley face icon		
7. Click Feeling (or thinking about, etc.)		
8. Press the down arrow on your keyboard or scroll until you find a feeling, such as Proud, then click it.		
9. Click Post		
Total + _____ / Total Tasks _____ = _____ %		Total Errors of Commission = _____

Correct or Incorrect: If the participant completes the step within trial, mark + next to the step. If participant does not complete step, mark – next to the step. Disregard spelling/grammar errors. The participant may choose to type a phrase other than the phrase in the quotation marks on the task analysis – please mark this as correct if it is functional.

In order for a step to be correct, the behavior must be performed in the correct “place” on Facebook. Ex: If Sally types “Lilly Ann Summers” in the Update Status box while working on Search and Request a Friend, this is not correct.

Errors of Commission: Any EXTRA computer-behaviors performed by the participant. These include clicks on the wrong word/icon/picture, clicks on the wrong text box before or after completing a task, words typed in the wrong textbox (each letter and space count!), scrolls up and down. Errors of commission do not include spelling and backspacing errors involved in spelling.

Appendix E: Social Validity Questionnaire

	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
1. I enjoyed participating in this study.	1	2	3	4	5
2. I liked using the task analysis.	1	2	3	4	5
3. The task analysis was easy to use.	1	2	3	4	5
4. The task analysis helped me improve my Facebook skills.	1	2	3	4	5
5. I liked learning with Behavioral Skills Training.	1	2	3	4	5
6. Behavioral Skills Training was easy to follow.	1	2	3	4	5
7. Behavioral Skills training improved my Facebook skills.	1	2	3	4	5
8. I prefer the personal interaction BST provides versus an instructions only approach.	1	2	3	4	5
9. I plan to continue using Facebook after the study concludes.	1	2	3	4	5
9. What did you like most about the study? _____ _____ _____					
10. What did you like least about the study? _____ _____ _____					
Any other comments: _____ _____ _____					