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THE EFFECTS OF DI FLASHCARDS WITH A DI DISCRIMINATION AND MATCH TO SAMPLE ON LETTER IDENTIFICATION FOR FOUR PRESCHOOL STUDENTS WITH DOCUMENTED DEVELOPMENTAL DELAYS

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Abstract: *The purpose of this study was to determine if the use of Direct Instruction (DI) flashcards combined with reinforcement, was effective at teaching a student to identify the letters of the alphabet. When the DI flashcard intervention did not improve student performance, a DI discrimination and match to sample paired with reinforcement were employed to teach our participants to recognize the 26 letters of the alphabet. A multiple baseline across letter sets was used. The study was conducted in a self-contained special education preschool classroom in a public school located in the Pacific Northwest. Low levels of improvement with the use of the DI flashcards, led to the decision to change the intervention to the DI discrimination and a match to sample procedure. Learning was not consistent amongst participants, but they all improved from their baseline performance. This study suggests that the use of DI discrimination and a match to sample method were effective at teaching preschool aged students to identify letters.*

Keywords: *preschool students with disabilities, letter names, flashcards, match to sample, discrimination, tangible reinforcers, Direct instruction, model, lead, test, data based decision making*

Introduction

Children who are documented with having developmental delays tend to do poorer in school than typically developing peers. The term "developmentally delayed" is defined under Part C of the Individuals with Disabilities Education Improvement Act (IDEA) of 2004. Experiencing developmental delays is described "as

measured by appropriate diagnostic instruments and procedures in 1 or more of the areas of cognitive development, physical development, communication development, social or emotional development, and adaptive development; or (ii) has a diagnosed physical or mental condition which has a high probability of resulting in developmental delay" (IDEA 2004, §632(5)(A)) (Shackelford, 2006). In the state of Washington a diagnosis of having developmental delays requires a developmental evaluation by a highly trained professional that shows a 1.5 Standard

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Deviation or 25% delay in one or more areas (Shackelford, 2006). A delay in any of the five areas listed in the definition would effect school performance. It has been shown that early intervention through early childhood education for children who have been identified at a young age as having developmental delays, leads to greater outcomes for these children when they enter kindergarten (Bagnio & Salaway, 2008).

Preschool students with documented having in the area of cognitive development and communication development, would benefit greatly from intervention on pre-reading skills because research has shown that early reading abilities are a strong predictor of an individual's long term success in school. (Bagnato & Fevola, 2007; Cunningham & Stanovich, 1997; Shapiro, 2011) The ability to read is so crucial because by the end of the third grade most students are expected to learn academic content through reading. (Adams, 1990) If a student cannot read when they reach this point in school, they will not be able to comprehend the academic content that is crucial for success in academics (Howard, McLaughlin, & Vacha, 1990; Johnston, Anderson, & Holligan, 1996; Rinaldi, Sells, & McLaughlin, 1997; Schnagl, McLaughlin, Derby, & Chadduck, 2010). More children are entering school with insufficient levels of language development for school success (Lonigan & Whitehurst, 1998). Of these students, one-third have significant difficulties with learning to read (Adams, 1990; S. Shaywitz, Escobar, B. Shaywitz, Fletcher, & Makuch, 1992).

Early intervention is crucial for students who struggle with cognitive, and communication skills because studies have shown that children with low reading abilities have a harder time catching up with their peers, who are building upon their existing literacy skills (Browder, Wakeman, Spooner, Ahlgrim-Delzell, & Algozzinc, 2006; Stanovich, 1986). Learning to read is comprised of several pre skills, which include phonological processing, print awareness, and oral language. Print awareness is a broad category that includes the concept of alphabetical knowledge (Johnson et al., 1996; Mason 1980). Alphabet knowledge specifically is one of the best predictors of reading achievement (Adams, 1990; Stevenson & Newman, 1986). Recognition of individual letters has also been identified as a strong indicator of later reading success (Catts, Fey, Zhang, & Tomblin, 2001; Johnston et al., 1996). It has been shown that the act of labeling letters familiarizes children with letters, which allows them to store the information necessary for reading in their long-term memory (Gibson, 1969; Murray & Lee, 1997). The ability to discriminate and match letters is a skill, which leads to letter identification. It too is an important skill for early literacy (Johnson et al., 1999).

Review of the Literature

Several methods of early intervention have shown success in teaching students with developmental delays. Specialized instruction has been shown to be beneficial in teaching pre-skills for reading, and specifically the skill of letter identification (Howard, Williams, & Lepper,

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2009). The procedure of using direct instruction flashcards has been successful in teaching academic skills to students with special needs (Bishop, McLaughlin, & Derby, 2011; Crowley, McLaughlin, & Kahn, in press; Hayter, Scott, McLaughlin, & Weber, 2007; Herberg, McLaughlin, Derby, & Williams, 2011; Tan & Nicholson, 1997; Ruwe, McLaughlin, Derby, & Johnson, 2011). Direct instruction flashcards involves using a model, lead, and test procedure to teach children academic skills. The teacher models the correct answer, the student and teacher say the problem and answer together, and finally the card is presented to the student. If the student corrects his error, he moves on to the next flashcard and this error card is placed back three or four cards (Hopewell et al., 2011; Lund, McLaughlin, Neyman, & Everson, 2012). It the student makes another error, the model, lead, and test error correction procedure is repeated. In addition, when a student makes an error, this error card is placed three or four back in the stack, so the student can have frequent practice correcting his or her errors. DI flashcards have been effective teaching such skills as sight words (Romjue, McLaughlin, & Derby, 2011; Ruwe et al., 2011), math facts (Brasch, Williams, & McLaughlin, 2008; Erbey, McLaughlin, Derby, & Everson, 2011; Glover, McLaughlin, Derby, & Gower, 2010; Mann, McLaughlin, Derby, & Everson, 2012), and other discrete skills such as name traffic signs (Ashbaugh, & McLaughlin, 1997).

Discrimination and matching activities using objects is another method of intervention that has shown success with students who have severe to moderate cognitive disabilities (Mackay, Soraci, Carlin, Dennis, & Strawbridge 2002). This procedure has a student respond by making a choice from different items, and then matching that choice to the identical item. In 1971, Sidman (1971) conducted a seminal study with regard to stimulus equivalence. A developmentally disabled individual, able to match spoken words to pictures and name the pictures but could not read printed words aloud or with comprehension, served as his participant. Sidman demonstrated that by teaching the participant to match spoken to printed words, the student could read with comprehension (matching written words to pictures and matching pictures to printed words) and oral reading. This was a remarkable discovery indicated that by teaching only one stimulus-stimulus relation, three additional relations emerged without any further instruction or training. In a systematic replication Sidman and Cresson, (1973) employed two persons with Down syndrome as participants. Both were unable to match printed words to pictures (reading comprehension) during baseline. Their participants first learned to match printed words to printed words (visual discrimination) and to match dictated words to the corresponding picture (auditory comprehension). After being taught to match dictated words to printed words, the participants were then able to read the words orally and with comprehension. Matching to sample has been effective teaching students a wide variety of skills but it typically reqires one on one instruction (Cooper, Heron, & Heward, 2007).

The purpose of this study was to determine if the use of DI Flashcards combined with reinforcement, was effective at teaching a student to identify the letters of the alphabet (Hayter, et al. 2007; Tan & Nicholson, 1997). Another purpose of this study was to find out if the use of

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DI discrimination and match to sample paired with consequences, would be useful at teaching a student to recognize the 26 letters of the alphabet. This would provide a replication of the work of Mackay, Soraci, Carlin, Dennis, and Strawbridge (2002).

Methodology

There were four participants in this study. These participants were chosen because they were all moving on to kindergarten at the end of the school year. The teacher was worried about the participants' ability to do well in kindergarten because they were having problems learning the letters of the alphabet, which is a kindergarten readiness skill.

The first participant was a five-year-old female with developmental delays. She attended special education preschool with goals in the area of speech and communication, and preacademic skills. Because of her speech and communication delays many words and sounds that she tried to communicate were unrecognizable. This participant used a picture exchange communication during snack times. She also frequently pointed at picture cues displayed around the room, and items in the room.

The second participant was a five-year-old female with developmental delays. She attended special education preschool with goals in the area of speech and communication, pre-academic, behavior, and social. The second participant often had problems vocalizing identifiable words and sounds, due to her speech delays. During meal time, she used a picture exchange communication.

The third participant was a five-year-old male with developmental delays. He attended special education preschool to work on goals in the areas of pre-academic, behavior, and social. The teacher explained that this was the second year the participant had attended special education preschool, and he still had not learned to identify the letters in the alphabet.

The fourth participant was a five-year-old male with developmental delays. He attended special education preschool with goals in the area of pre-academic, speech, and communication. The fourth participant could vocalize many understandable words. He had difficulty with certain sounds, which made some words harder to understand. This participant also liked to communicate with the least words possible.

The study took place in a self-contained special education preschool classroom in the Pacific Northwest. All of the participants attended this class in the afternoon. There were a total of 11 students in the class at the beginning of the study, for a brief time there were 10, and then at the end of the study there were 11 students. The adults in the classroom consisted of the first author, the classroom teacher, and two instructional assistants. Therapists were in and out of the classroom throughout the class session. The first author worked with each participant

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individually, for 10-20 minutes each, at an empty classroom table located away from other students.

Materials

Several materials were used in this study. First, 5x7 flashcards that had upper-case letters printed in the Handwriting Without Tears font (Olson, 1998) were used. Another material used was plastic upper-case letters. A laminated sheet that had the alphabet in capital letters was used for matching. A timer that recorded seconds was used to make sure students responded within the time limit. Several materials were used for reinforcers. These included: barbeque potato chips, sour cream and onion potato chips, chocolate pieces, M & Ms, animal crackers, and fish crackers. Other items used were paint brushes, and paper for painting time. The first author employed data sheets and a pen to record responses.

Dependent Variables and Measurement

There was one dependent variable measured in this study. The dependent variable measured was the number of letters correctly identified by each participant. The definition of a correct response was changed and became picking up the correct letter named by the first author, from a group of three letters. The participant also had to match the letter they chose to the correct letter on the alphabet board; by placing it in the square that had the same letter they chose, in order for it to be a correct letter identification. Finally, choosing the letter and matching it to the correct letter on the board had to happen within 10 seconds. If the participant picked the correct letter but did not match it correctly it was considered incorrect. Also, the first author switched out the letters that the participant was choosing from so the two letters that were different from the correct letter were not always the same. The response was also recorded as an incorrect if the participant did not choose the letter and match it within 10 seconds. On a data sheet that included the 26 letters of the alphabet, the first author recorded a + for correct responses, and a - for incorrect responses next to the letter.

Experimental Design and Conditions

A combination ABACA single case replication design was combined with a multiple baseline design (Barlow, Nock, & Hersen, 2008) across sets of letters. This design was used to evaluate the effectiveness the various interventions. There were seven sets of letters for each participant. These sets of letters were taught to the participants in a staggered fashion. New sets of letters were introduced to the participants based on the individual participant's success with their previous letter sets.

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Baseline 1. During the first baseline phase, the first author showed each participant the deck of DI Flashcards. The participants were asked "What letter is this?" They were then given five seconds to answer and the first author recorded incorrect and correct responses on the data sheet. During the baseline phase, the first author did not give the participants any positive or negative feedback in relation to their responses. On the other hand, participants were told to put forth their best effort and were given specific and general praise, and tangible reinforcers for participation in the session.

DI flashcards. Seven sets of letters were created. Each participant had different sets of letters. The first two sets of letters contained the letters that they most frequently got correct during baseline, and the contained letters that were in their first names'. Letters that they got correct were chosen for the first sets to build confidence. Letters in their name were chosen because the participants need to be able to recognize their names daily in preschool, and they will need to for Kindergarten next year. The remaining sets contained a mix of the remaining unused alphabet letters. Sets one through six contained four letters. Set seven contained the 2 left over letters.

At the beginning of each session, the first author, using a DI method, taught the participant their current set. A model, lead, test format was employed to teach the student their set. After teaching, the first author went through the current set with the participant. The first author made a pile of corrects and a stack for errors. The teacher then performed error correction by utilizing the DI method of model, lead, and test.

At the conclusion of each session, the first author used the DI flashcards to go through all seven sets of letters. The first author administered tangible reinforcement for every correct response on the current set of letters. The first author recorded the number of correct and incorrect responses for each participant. This was performed at the end of each session to record intervention data on the current set, and baseline data on the remaining sets.

Baselines 2 and 3. During the second baseline, the first author gave each participant a capital plastic letter and told them to match it go the sample board. They were then given five seconds (5s) to match each letter, and the first author recorded incorrect and correct responses on the data sheet. A third baseline had to be taken. This baseline consisted of the first author giving the participant three letters and then asking where one of the letters was (i.e. "Find the T."). Then each participant had to match the letter to the sample board. They were then given ten seconds to answer, and the first author kept record of incorrect and correct responses on the data sheet. During these baseline phases, the first author did not give the participants any positive or negative feedback in relation to their responses. On the other hand, participants were told to put forth their best effort and were given specific and general praise, and tangible reinforcers for participation in each session.

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DI Discrimination and match to sample. The same sets of letters developed for the DI flashcard intervention were used for each participant just as before. At the beginning of each session, the first author, using a DI method, taught the participant their current set. A model, lead, test format was employed to teach the student their set. The first author showed the participants the plastic letter being taught and said, "This letter is___." Then the first author asked each participant to repeat what letter it was. The first author then mixed up the letter shown with two other letters and said "Where is the ___?" The first author showed the participant how to find the letter and match it on the sample board. After teaching the first author went through the current set with the participant. The first author made a pile of corrects and a pile of incorrects. The teacher then performed error correction by utilizing the DI method of model, lead, and test.

At the end of each session, the first author used DI discrimination method and match to sample with all seven sets of letters. The first author administered tangible reinforcement for every correct response on the current set of letters. The first author recorded the number of correct and incorrect responses for each participant. This was performed at the end of each session to record intervention data on the current set, baseline data on the remaining sets, and maintenance data on previously mastered sets.

Data Collection and Inter observer Agreement

Data were collected by the first author at the end of each five-minute teaching session. Initially data was collected by the first author going through the flashcards with each participant. As the definition of correct and incorrect responses changed, the way correct and errors were recorded changed. With the new definition, the first author would give the participant a choice of 3 letters and tell them to identify one of the letters. Then the participant had to match the letter to the corresponding letter on the letter chart. For baseline no feedback to the responses were provided, during intervention specific praise, general praise, and tangible reinforcers were given for correct responses on the set that was being taught. The first author collected data after each response by marking + for a correct response, and – for an incorrect response on the data sheet next to the letter being tested.

Reliability was taken 6 of the 18 (33%) sessions for Participant 1, on 6 of the 17 (35%) sessions for Participant 2, on 5 of the 13 (38%) sessions for Participant 3, and for 4 of the 13 (31%) for Participant 4. Inter observer agreement data was taken once during baseline for all of the participants. It was taken five times during intervention for Participant 1 and Participant 2, four times for Participant 3, and three times for Participant 4. Either one of the Instructional Aides in the classroom or the master teacher took reliability. They were informed of the data taking procedures and recorded data in the same manner as the first author. Reliability was calculated by dividing the number of agreements by the number of agreements and

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disagreements, and then multiplied by 100. Inter observer agreement for Participant 1 was 98%, Participant 2 was 97%, Participant 3 was 98%, and Participant 4 was 100%

Findings

Overall results of this study showed an increase in letter recognition across sets that were taught. The overall results are presented in Figures 1 through 4.

Baseline

During the initial baseline phase, the results of expressive letter recognition were low for all four participants. The first baseline phase consisted of three sessions for all four participants. The letters of the alphabet were divided into seven sets that were presented to each participant in a multiple baseline design across sets. All four participants consistently recognized few letters. For Set 1 Participant 1, Participant 2, and Participant 3 identified a mean of just 1.3 letters. For the remaining sets they identified zero letters. The fourth participant identified an average of one letter during the first set, and zero letters for sets two through seven.

DI Flashcards

The results of the DI flashcards are also shown in Figures 1 through 4. During this initial intervention, the students showed a slight increase in performance for Participant 1, Participant 3, and Participant 4. With the intervention of DI flashcards, Participant 1 was able to recognize an average of 2 letters for Set 1. Participant 2 decreased in performance to a mean of 1 letter identified in Set 1 (See Figure 2). For Set 1, Participant 3 identified an average of 1.5 letters for Set 1 (See Figure 3). A small increase for Participant 4 was found (M = 2.5 letters).

Baselines 2 and 3

The second baseline failed to decrease performance for Participants 1 though 3. Therefore, only one session of this baseline was carried out. With the third baseline, a large decrease in picking the correct letter and successfully matching it were recorded for all participants.

The letters of the alphabet were kept in their previously divided seven sets, which were presented to each participant in a multiple baseline design across sets. The first participant identified an average of 2 letters for Set 1 and Set 2; 0.8 for Set 3; 1.2 for Set 4; 1.3 for Set 5; and .6 for Sets 6 and 7. Participant 2 recognized a mean of 2.5 letters for Set1; 1.2 for Set 2; 1 for Set 3; 1.1 for Set 4; .9 for Set 5 and 6; and .8 for Set 7. The third participant recognized an average of 1.0 letter for Set 1 and Set 5; .5 for Set 2 and Set 6 ; 1.5 for Set 3; 1.2 for Set 4; and .7 for Set 7. The last participant recognized a mean of 3 letters for Set 1; 1.5 for Set 2; .7 for Set 3;

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.9 for Set 4; 1.1 for Set 5; .1 for Set 6; and .9 for Set 7. During the staggered baseline all participants' levels of letter recognition remained low.

DI Discrimination and Match to Sample

The results of using the DI discrimination technique and match to sample method, across all four participants resulted in an increase level in performance.

For Participant 1 this was carried out with Sets 1-3. Following the implementation of the DI discrimination and match to sample, the first participant was able to recognize an average of 3.8 letters for Sets 1 and Set 2. The two day intervention for Set 3, produced an increase to an average of 2.5 letters identified.

For the second participant, implementation of DI discrimination and match to sample completed for Sets 1 and 2. Following this intervention, Participant 2 was able to recognize a mean of 3.8 letters for Set 1 and 3.4 letters for Set2.

For Participant 3, Sets 1 and 2 were taught using the DI discrimination and match to sample. On Set 1, the participant averaged 3.5 letters correct. For Set 2, only one day of this intervention was carried out and the participant recognized 2 letters.. After using DI discrimination and the match to sample method Participant 4 was able to recognize an average of 3.7 letters for Sets 1 and 2.

Conclusion

Overall, the DI flashcards were not all that effective with our participants. This fails to replicate our previous research with elementary students (Bishop et al., 2011; Hopewell, McLaughlin, & Derby, 2010; Kaufman et al., 2011; Ruwe et al., 2011; Travis et al., 2012), middle and high school students (Hayter et al., 2007; Ruwe et al., 2011) and that of Herberg et al (2011) with preschool students with developmental delays. The present research measured a different skill set than our previous research with DI flashcards. In addition, Herberg et al. study employed an easier (color recognition). However, the failure to replicate merits additional research with preschool students with developmental delays

However the implementation of DI discrimination methodology and match to sample produced large improvements in letter recognition. We terminated the DI flashcard procedure was because it failed to improve the performance of our participants. We decided to add the DI discrimination procedure and match to sample. When student performance improved, we continued with these two intervention procedures. The match to sample outcomes replicate the earlier work of Sidman and colleagues.

Participant 1 had the best attitude about working with the first author, and she increased her amount of letter recognition the most. She had a lot personally going on at home including

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her parents going through a divorce, and her grandparents receiving guardianship over her. Although this was occurring, she did not let it effect her attitude. At first she was somewhat hesitant about working with the first author, but then tangible reinforcers were used to get her excited about the activity and she responded well. She enjoyed working for time to paint, and M and M's. She would get tokens for every letter she identified correctly, and when she reached five she received two minutes of paint time. Both of these reinforcers were available at each session so the participant was very happy to participate in each session. She didn't really understand the DI flashcards so her improvement was low during this initial intervention. Even directly after the first author used the model, lead, test procedure, when asked "What letter?" she would often say "Don't know." Once the intervention was changed to match to sample she caught on very quickly and achieved mastery with two sets after six sessions. Finally, the first author thinks her perfect attendance was also a contributing factor in her success.

The second participant did not always want to participate in the sessions. Although this was the case, she still showed improvement on her letter identification. Often when the first author would tell her it was time to participate in the activity she would say, "No." When this occurred, the first author would set a timer for her for three minutes, and tell her that when the timer went off she had to work on her letters. Sometimes after this was done Participant 2 would automatically go work with the first author, and other times she would play for the three minutes. When the timer went off she would go work with the first author, but often she was not initially enthusiastic about it. She would say "alright," or "okay," but then would come and work with the first author. To make her more excited about learning to identify her letters, the first author gave her a tangible reinforcer. She liked barbeque potato chips, and worked very well when she received these. The first author had chips available for this participant at each session so the participant would stay engaged in the activity. During a couple of sessions this participant had to take a break and come back to the session because she could not maintain attention. Once a break was given, she came back willing fully and worked well. She really didn't understand the DI flashcards, and her performance decreased during this time. Once the match to sample intervention was used, she responded very well and increased her letter identification. She only missed one session, which was very helpful because the first author was able to work with her on her letters for several sessions, which contributed to her improvement.

Participant 3 did not like participating in the sessions in the beginning, but as time passed, he was willing to work. He was given tangible reinforcers for correct answers, and for participation. Participant 3 liked to work for barbeque chips, and for M and M's. These were available at each session, which made him more interested in the activity. He learned the least amount of letters. The first author believes that his low attendance contributed to his low levels of improvement. He was often inconsistent; for intervention with the match to sample he would demonstrate mastery and the following day he would not remember one of the letters. This was

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a pattern for him for the match to sample intervention period. He never achieved mastery with the first set, but his average letters recognized in the first set did increase.

Participant 4 showed an increase in letter identification, with both the DI flashcards and the discrimination and match to sample technique. Although he showed an increase with the DI flashcards, it still was a low rate of increase in comparison with the discrimination and match to sample. With the match to sample he attained mastery very quickly. This occurred even though he was absent for three of the intervention sessions. He always enjoyed the sessions and worked well when tangible reinforcers were present. His favorite things to work for were pieces of chocolate and animal cookies. The first author made these items available at all sessions. Often the first thing Participant 4 would say once the session began was "Can I have some chocolate?" The first author would reply, "After you do some work." He then would be very excited to work, and he was a quick responder. The outcomes with participant 4 merit additional research using DI flashcards and DI discrimination training and match to sample procedures.

Suggestions and Recommendations

Although employing match to sample was quite effective, it was somewhat impractical. Without the necessary staff to allow for one to one instruction during the day, this procedure may be difficult to employ. In order to insure accuracy, the teacher or instructional assistant has to monitor the student's immediate response, which can only be done if they are watching that specific student and response. It is possible that the teacher could have someone work with students in a group, but all of the students would have to have the same letters. It also was very time consuming because the first author had to work with each participant for approximately fifteen minutes over each session. This amount of time may not be efficacious for a classroom teacher to set aside for several students each day.

The materials need for the interventions were easily accessible, and relatively inexpensive. The only materials used included flashcards with letters written on them, data sheets, plastic letters, and a match to sample board. All of these items could be bought at a local store, or could be provided by the school.

The fourth author was very pleased with the second intervention (DI discrimination and match to sample). Anecdotally she noticed an increase in the participants' awareness of their names. She played a letter game with her class, and several of the participants were able to identify letters, when other classmates could not. She informed the first author that she planned on continuing using this method with the students because she noticed an improvement.

The first author was very pleased with the outcomes of this study. Although the first author was only able to work with the students for eighteen sessions, this method of instruction showed improvement for all of the participants. Letter identification is so crucial to students' future success in the schooling process (Catts et al., 2001; Johnston et al., 1996). These participants showed an improvement in alphabet knowledge through the use of discrimination

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and match to sample techniques. Future research should be done to see if these methods are effective with other students, and if these procedures could be used to teach other pre-reading skills in a typical preschool setting.

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Figure Captions

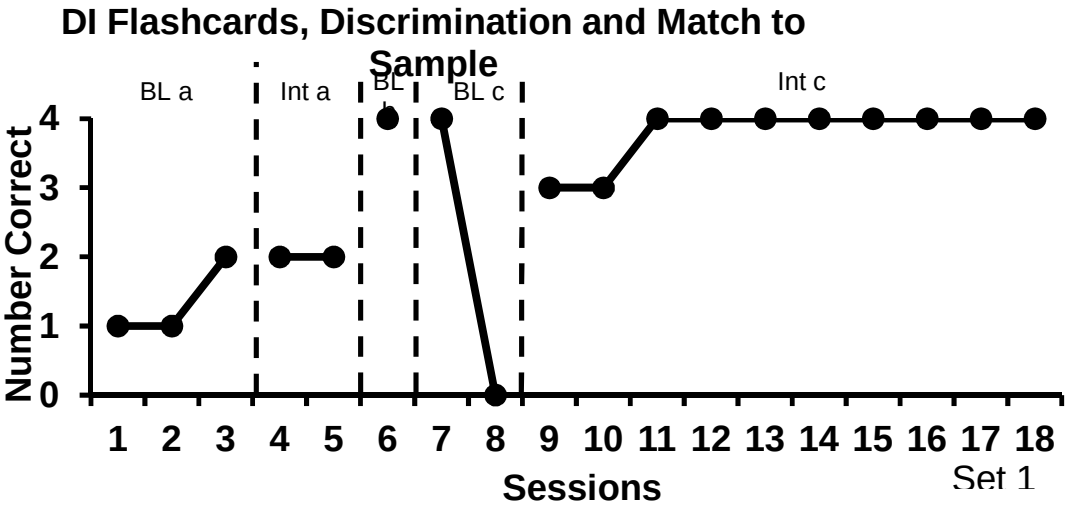
Figure 1. The number of letters identified by Participant 1 is shown across seven sets. Sets 1, 2, 3, 4, 5, and 6 had a possible total of four letters each and Set 7 had a possible total of two letters each.

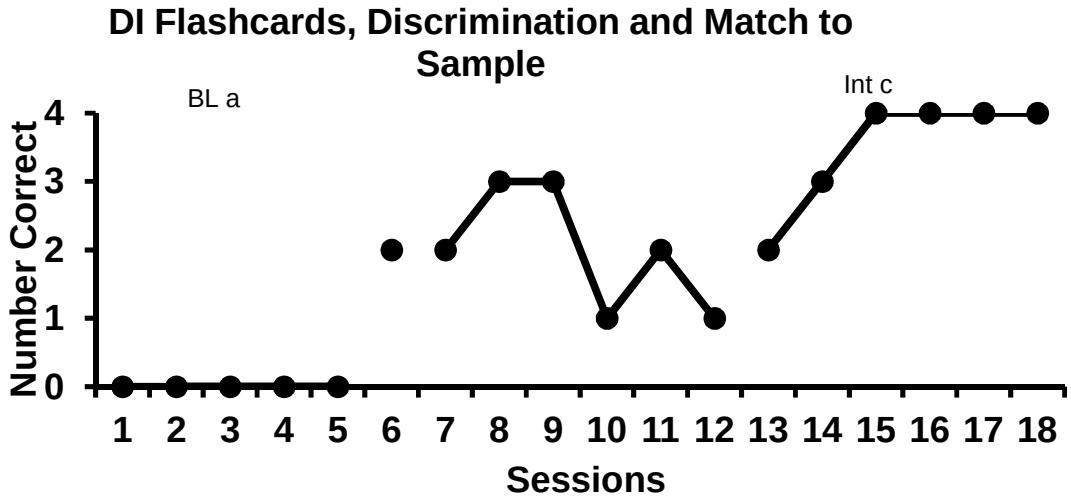
Figure 2. The number of letters identified by Participant 2 is shown across seven sets. Sets 1, 2, 3, 4, 5, and 6 had a possible total of four letters each and Set 7 had a possible total of two letters each.

Figure 3. The number of letters identified by Participant 3 is shown across seven sets. Sets 1, 2, 3, 4, 5, and 6 had a possible total of four letters each and Set 7 had a possible total of two letters each.

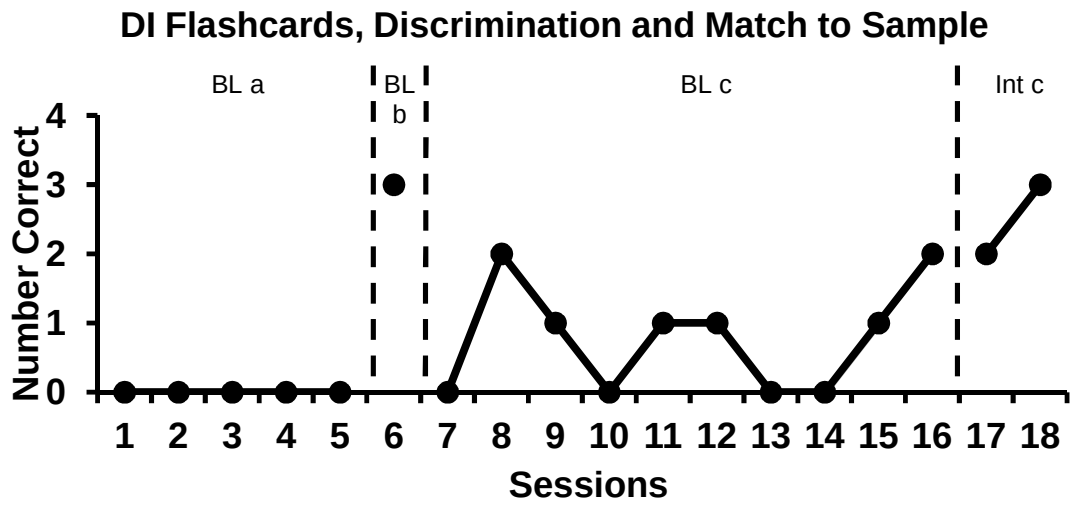
Figure 4. The number of letters identified by Participant 4 is presented across seven sets. Sets 1, 2, 3, 4, 5, and 6 had a possible total of four letters each while Set 7 had a possible total of just two letters.

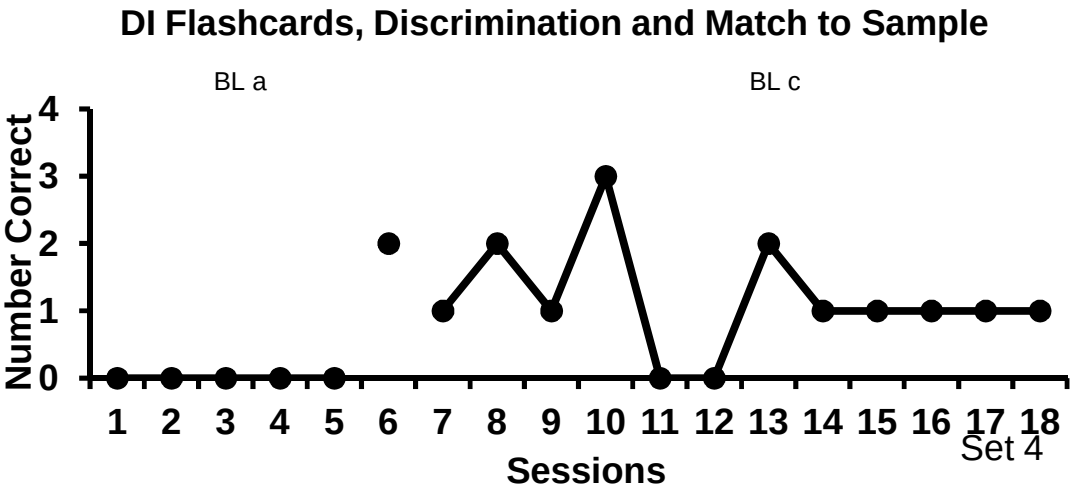
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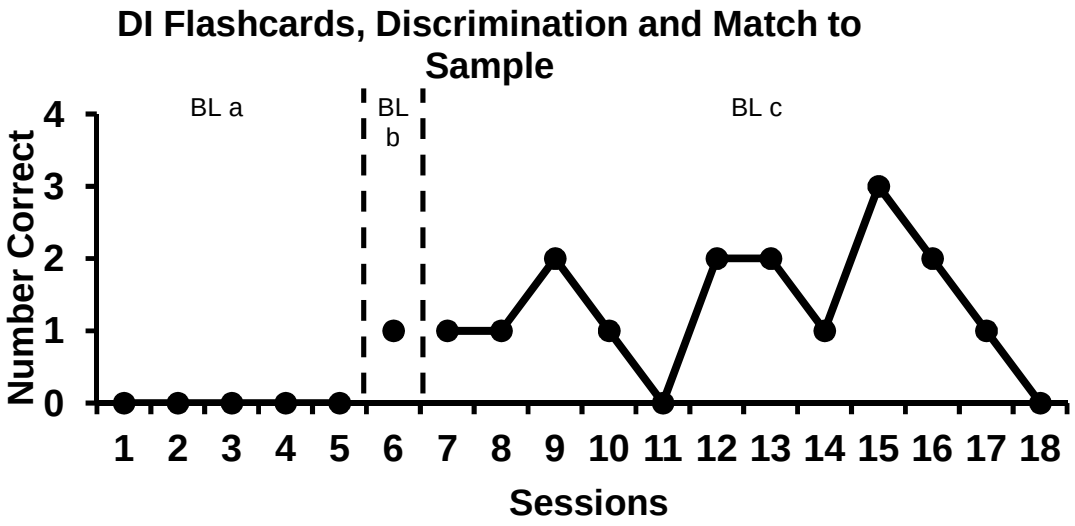


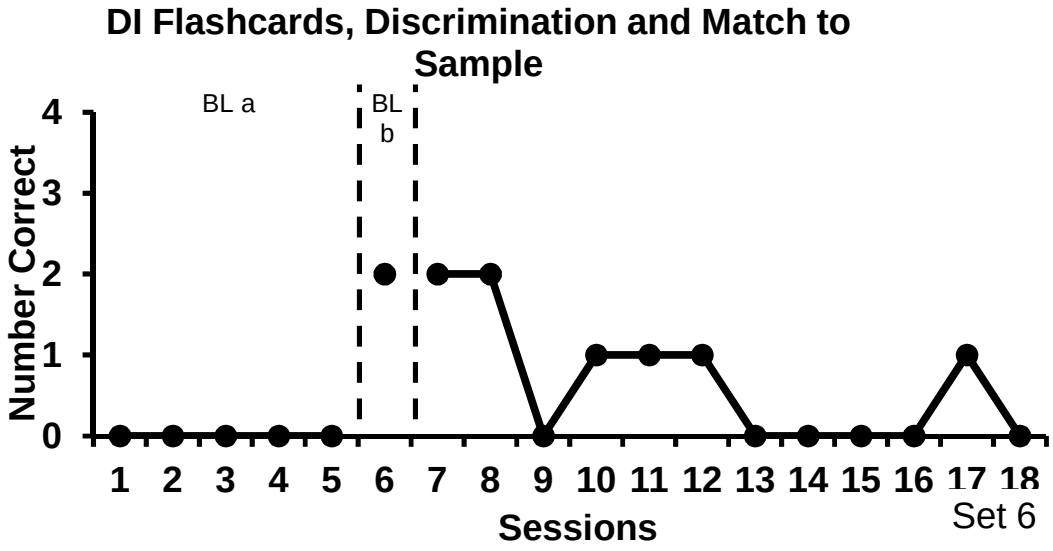
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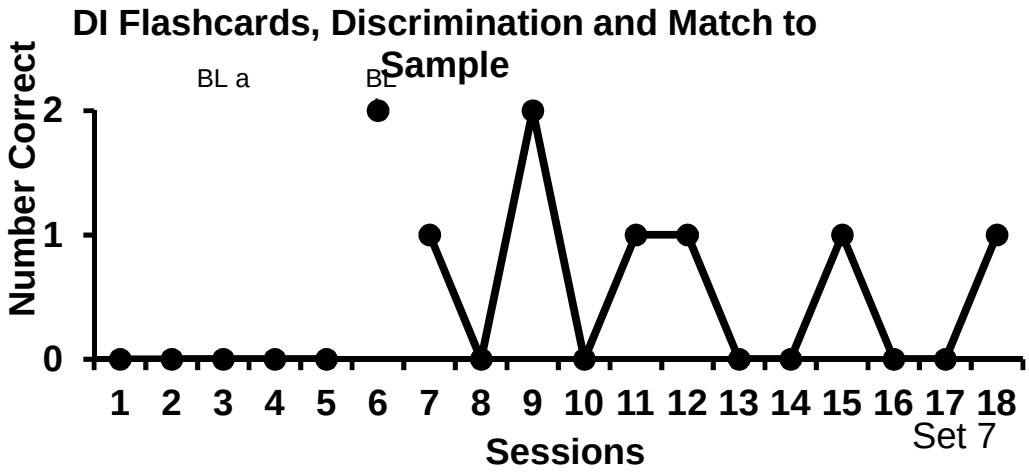


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Using Novels for Children to Combat Bullying

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Abstract: *Young people often bully others because of perceived differences and a lack of empathy. Because many children do not know effective strategies for discouraging tormentors and because bullies often have a higher social status than targets, the abuse may continue for years. Bullying creates a hostile environment where young people cannot learn or function well. This harassment is dangerous to children's mental, emotional, and physical health. Also, bullying may have a long-term effect on an individual's social, academic, and career success. Reading and discussing good novels can help children to understand bullying, learn anger management, deal with tyrants, realize that many people suffer from harassment, cultivate mutual respect, appreciate diversity, repair damaged self-esteem, and dare to intervene to stop abuse. This article will analyze four books that can increase students' respect for individual differences and the varied cultures that comprise our society. These works prompt good class discussions and raise young people's awareness of the threat that bullying poses for our social fabric. Targets of bullies, bystanders, and perpetrators benefit from such discussions and from writing essays or stories about bullying. These books can help us transform our communities into safe environments that foster non-aggressive problem-solving and cultivate every person's self-esteem.*

Key Words: *Bullying, Novels, Empathy, Self-Esteem, Diversity, Respect*

Using Novels for Children to Combat Bullying

Bullying of children is common in neighborhoods, on sports teams, and in schools around the world. Thomas P. Tarshis and Lynne C. Huffman (2007) conclude that 90 percent of the elementary school students they surveyed were targets of bullies, and 59 percent of the children bullied others (p. 130). Both boys and girls bully their peers with equal frequency (Swearer & Tam Cary, 2003, pp. 70, 74). Maurice J. Elias and Joseph E. Zins (2003a) argue that repeated school bullying constitutes "a culture . . . of intimidation" (pp. 1, 4).

Young people often bully others because of perceived differences and a lack of empathy. Differences include a person's weight, teeth, style of speech, clothing, strength, and intelligence (Swearer & Tam Cary, 2003, pp. 71, 75). Sandra Graham, Amy Bellmore, and Jaana Juvonen (2003) have

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discovered that children of color in Los Angeles middle schools are often victims of bullying, especially African-American youth (pp. 125, 127, 135). Immigrant middle school children in Austria also suffer from bullying, especially Turkish or Kurdish students (Strohmeier & Spiel, 2003, pp. 109-12). Elizabeth Englander (2007) finds that bullies' targets may include individuals with special needs, children from lower social classes, homosexuals, lesbians, gifted children, "children of divorced parents, children of socially deviant parents," Muslims, Jews, and other ethnic minority groups (pp. 206-07, 210).

Barbara Coloroso (2003, pp. 39-40) and Englander have pointed out similarities between bullying and hate crimes. Englander (2007) observes that often "bullying appears to be a 'junior' or 'apprentice' version of adult hate crimes." Both juvenile bullies and adults who commit hate crimes attack those who are different, use offensive language prohibited in most contemporary workplaces, and reject the value of civility and tolerance for others (pp. 206-07). According to the U. S. Department of Education (2010c), bullying creates a hostile environment where children cannot learn or function well.

Bullying is traumatic: it endangers young people's mental, emotional, and physical health. Researchers around the globe have found that victimized children tend to have insomnia, headaches, stomach aches, low self-esteem, depression, post-traumatic stress, and suicidal thinking, as well as physical injuries. Frequently bullied children feel lonely, lack trust in friendships, may choose to avoid school to evade their tormenters, and may have low academic achievement and aspirations (see Paul & Cillessen, 2003, pp. 27, 39; Craig, Pepler, & Blais, 2007, pp. 466-67; Holt & Espelage, 2003, pp. 91, 95; Graham, Bellmore, & Juvonen, 2003, pp. 126-27; Goldbaum et al., 2003, pp. 145-48, 152; U. S. Department of Education, 2010b). Therefore, bullying may have a long-term effect on an individual's social, academic, and career success.

Adults often think that children should deal with harassment themselves because it will toughen them up. However, Wendy Craig, Debra Pepler, and Julie Blais (2007) have discovered that many children do not know effective strategies for discouraging bullies (pp. 467-68, 470). Ginny Esch (2008) points out the vulnerabilities of young children: "They are learning how to deal with their own emotions, learning about societal norms and acceptable behavior, and developing communication skills. . . . Because of their lack of maturity, they often do not have the ability to handle tormentors" (p. 380). Graham, Bellmore, and Juvonen (2003) conclude that victims of bullying often believe that they are the only ones who get harassed. Graham and her co-authors insist that such students need adults to acknowledge "the pervasiveness of the problem." Graham's team suggests that educators and psychologists use "a systemic, whole-school approach" to combat bullying that involves every student (pp. 133-34). Jennifer J. Paul and Antonius H. N. Cillessen find that, without adult intervention, many of the same students are victimized for years (pp. 33, 38; see also Goldbaum et al., pp. 141, 144-49, 152).

Peer friends can also assist targets of bullies. Goldbaum and her team (2003) emphasize that children who have caring friendships suffer less from bullying because friends often intervene or help victims to problem-solve. Goldbaum's group recommends developing systemic "programs . . . directed at the peer group to encourage inclusion and foster supportive social networks." Coloroso (2003)

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agrees: "The more opportunities students from diverse backgrounds and interests have to work and play together, the less likely they will be to form cliques that have as their hallmark exclusion and derision of those 'beneath' them" (p. 191). Furthermore, "classroom discussions can identify prosocial strategies for intervening in bullying and emphasize the critical role and responsibility of the peer group in stopping the harassment by supporting and standing up for the victims" (Goldbaum et al., pp. 152, 154).

Bullies may increase their power and prestige by aggression. According to Tracy Vaillancourt, Shelley Hymel, and Patricia Mcdougall (2003), both male and female bullies often have high self-esteem and "a substantial level of status and power within the adolescent peer group" (p. 170). Vaillancourt and her co-authors point out that such peer dynamics discourage intervention by bystanders when bullying occurs because "supporting a victim carries considerable risk for loss of social status" (pp. 172-73). Anti-bullying programs must address these issues in order to prevent peer support for abuse. Craig, Pepler, and Blais (2007) report that persistent bullying increases "the power differential between the child who is bullying and the child being victimized . . . , making it increasingly difficult for the victimized child to escape the torment" (pp. 465, 472; see also Vaillancourt, Hymel, & Mcdougall, pp. 168-69). They recommend "early intervention" by adults to stop the bullying before it traumatizes children (pp. 473-74; see also Goldbaum et al., p. 152). Englander contends that the power differential between the bully and the victim and the hate crime aspects of bullying make mediation difficult (pp. 208-09). According to Paul and Cillessen, adults need to stop "the processes of bullying in the peer group" (p. 41), and one method is to teach and encourage children to "develop effective anger management and conflict resolution strategies at an early age" (p. 29). Elias and Zins (2003a) contend that societies need to counter the "culture . . . of intimidation" by restructuring schools to make them "more caring, supportive, safe and effective places of academic, social, and emotional learning" (pp. 4-5).

Many researchers emphasize that "the school curriculum . . . can influence children to accept and respect socio-cultural differences" (Rigby, 2004, p. 294; see also Nansel, Haynie, & Simons-Morton, 2003, p. 57). The Department of Education (2010a) recommends that a "school may need to provide training or other interventions not only for the perpetrators, but also for the larger school community, to ensure that all students, their families, and school staff can recognize harassment if it recurs and know how to respond." Similarly, Englander emphasizes that anti-bullying programs should teach tolerance and respect for diversity (pp. 208-10).

Reading and discussing books on this topic can help students to understand bullying, realize that many people suffer from harassment, cultivate mutual respect, appreciate diversity, repair damaged self-esteem, and dare to intervene to stop abuse. Esch (2008) observes, "Children can make a connection with story characters and their feelings, and this association can promote self-confidence, empathy, and insight." In general, "Books about bullying help young children understand behavioral dilemmas while prompting them to brainstorm solutions to problems" (pp. 381-82). Lee Heffernan (2008) used picture books about bullying and other social issues in her third-grade classroom and asked

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the students to write stories about social issues. "Reading and working with books . . . served as a springboard for discussing, interrogating, and writing about issues of harassment, domination, and injustice in students' lives" (Lewison & Heffernan, p. 459). In this article, I will examine four novels that focus on bullying. Teachers, coaches, librarians, scout leaders, and parents can discuss these works with children. While discussing these books will not magically eliminate bullying, books can increase young people's tolerance of differences and alert children to the threat that bullying poses to individuals and to our social fabric.

Judy Blume (1974) writes *Blubber* in first-person narration from the perspective of a fifth-grade girl named Jill Brenner who gets caught up in bullying Linda, an overweight classmate. The ringleader of the bullies is Wendy, a socially prominent girl, who is assisted by her current buddy Caroline. The students mock Linda, calling her "Blubber" after she gives a report on whales (ch. 1, pp. 4-9). In the girls' restroom, Wendy, Caroline, and Jill take off Linda's cape, lift up her skirt, and pop buttons off her shirt. Wendy threatens punishment if Linda tells anyone (ch. 4, pp. 32-34). At school, Wendy and her supporters trip Linda, steal her lunch, and force her to say insulting things about herself (ch. 6, pp. 52-54; ch. 7, pp. 60-61; ch. 8, pp. 71-73; ch. 9, pp. 79-80; ch. 11, p. 89). They also make her eat "a chocolate-covered ant," show the boys her underpants, and kiss a boy in the class (ch. 11, pp. 90-92). Blume's numerous examples of students' abuse of Linda demonstrate how pervasive bullying can be.

Blume also portrays the students as overly willing to please popular Wendy. Obsequious Caroline does anything that her best friend tells her to do. When a group of girls are discussing how Mr. Machinist found out that Tracy and Jill put smashed rotten eggs in his mailbox on Halloween, Wendy insists that Linda/Blubber must have told the secret. When Jill says that they have no proof of Linda's guilt, the following exchange occurs between Wendy and Caroline.

> "I don't like what I hear, Jill," Wendy said. "Do you like what you hear, Caroline?"
>
> "Not if you don't," Caroline told Wendy. (ch. 16, p. 125)

Caroline's dialogue and actions emphasize that she is an unquestioning sycophant. Vaillancourt, Hymel, and Mcdougall's research demonstrates the difficulty that peers have in confronting socially prominent bullies. Later in the novel, Jill confronts Caroline with her complicity: "'You always do what Wendy says. Don't you have a mind of your own?'" (ch. 18, p. 147). Then Caroline stops bullying Jill and walks away. Jill also feels intimidated by Wendy and worries when Wendy acts displeased with her. After observing how Jill interacts with Wendy on the school bus, Tracy Wu tells her friend, "'I think you're scared of Wendy" (ch. 16, p. 126). Jill remembers Tracy's perceptive words at a turning point in the novel (ch. 16, p. 131). Blume implies that children need to avoid being so worried about pleasing a popular classmate that they engage in conformist bullying.

Finally, the students set up a trial of Blubber for allegedly tattling on Jill and Tracy's Halloween prank on Mr. Machinist. But Jill stops the trial when Judge Wendy refuses to grant Linda/Blubber a

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lawyer, probably because Wendy herself did the tattling. Furious with Jill for thwarting her, Wendy calls Jill's Chinese-American buddy Tracy "'your chink friend'" and vows revenge (ch. 16, pp. 125-32). Jill and the readers of *Blubber* can now clearly see that Wendy is a racist, power-mad, sadistic bully.

The next day, many classmates turn their mockery and bullying on Jill, calling her "B. B." for "Baby Brenner" (ch. 17, pp. 135-37, 146). Jill is underweight and is a fussy eater, so the students exaggerate these flaws. The attacks on Linda and Jill because their bodies are unusual sizes reflect many societies' obsession with women's having an ideal body. This obsession is very unhealthy for girls and women. In Blubber, much of the abuse is sexual harassment: taking off clothes, forced kissing, showing boys a girl's underpants, etc. Furthermore, Linda and Jill are both Jewish, so there is anti-Semitism involved in the class's choices in targets for bullying.

But the bullying of Jill does not end with name-calling. Wendy trips Jill, Donna bruises Jill by shoving her against the bathroom sink, and a group of classmates steals Jill's math homework (ch. 17, 136-37; ch. 18, 144-45). This cruelty upsets the heroine, and readers can recognize the poetic justice here. A few days later, Jill stands up for herself, and the bullying subsides (ch. 18-19, pp. 146-52). Her life returns to normal; however, she has freed herself from Wendy's intimidation and no longer participates in conformist bullying. Jill and readers of this novel now realize that Wendy is not a trustworthy friend: Wendy is mean, fickle, and obsessed with power.

In the last chapters of *Blubber*, Jill chooses to befriend Rochelle (ch. 18, pp. 148-49; ch. 19, 152), a quiet but intelligent girl who had bravely pointed out to the class that Linda needed a lawyer and had agreed to represent Linda to insure a fair trial (ch. 16, p. 131). Rochelle may not be as popular as Wendy is, but Rochelle treats other people with respect and stands up for social justice. Jill's new friendship with Rochelle shows how much Jill has learned about the dangers of unhealthy relationships. Blume also implies that this new friendship has the potential to bring out the best attributes of both girls.

The unique perspective in *Blubber* will help a young reader to realize that abuse of others may seem fun until the child herself or himself becomes the new target of bullying. When Jill tells her mother about the harassment of Blubber, Mrs. Brenner tells her daughter, "You should try putting yourself in her place" (ch. 7, p. 62). This is an important concept in *Blubber*. Jill's own experience as the target of bullies devastates her: "'Nobody likes me anymore,'" she tells her mother and cries (ch. 17, p. 141). Finally, Jill realizes that bullying destroys the victim's self-esteem and trust in other people. Blume also implies that children need to stand up against bullies and refuse to cooperate with a group's attacks on anyone. This complex book would generate good discussions.

A similar novel from a boy's perspective is Jerry Spinelli's *Crash* (2000). The first-person narrator is John Coogan, who acquires the nickname "Crash" when, as a toddler with his first football helmet, he tackles his cousin Bridget and she goes flying into a foot of snow (ch. 1, p. 1). This scene on the opening page of the novel serves as an emblem of Crash's view of life for his first thirteen years: "Life is football" (ch. 23, p. 83). For most of the novel, Crash is an unreliable narrator because of his narcissism, his obsession with winning, and his desire to dominate other people. Spinelli emphasizes that while

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Crash's macho philosophy works well for the boy as a star junior high running back, most human relationships require social skills and empathy that the protagonist lacks. Crash bullies his Quaker classmate and neighbor Penn Webb, tries to force himself on beautiful Jane Forbes, and brutally tackles his grandfather Scooter during a family touch football game.

When Scooter has a debilitating stroke, Crash gets in touch with his own softer side and questions his values and emotions. Crash discovers that both he and Penn care deeply about their elderly grandfather and great-grandfather, respectively. The protagonist also learns to appreciate Penn's genuine compassion and eventually helps his teammate to obtain a spot on their school's track team for the state's relay race. Crash also moves from obsessing about getting himself expensive athletic shoes to using his savings to buy his artistic mother a new paint set (ch. 49, p. 162). In contrast, Crash's former friend Mike remains stuck in his destructive machismo.

The book's only weakness is that Crash's transformation into an altruist happens suddenly in the last chapters. It is hard to believe that Crash, who has spent much of the novel bullying and making fun of soft-spoken Penn, can become his best friend.

Crash would be a good novel for children to discuss because it sharply contrasts Crash's bullying and traditional "masculine" traits with Penn's gentleness, respect, and compassion. Spinelli shows readers that a young man can choose to improve his life by acknowledging his less aggressive side and by developing kindness. Spinelli implies that peers should not admire bullies: Crash alienates Jane Forbes until he learns empathy; then Jane invites him to her Fourth of July party (ch. 49, p. 162). Clearly, Crash's newly learned respect for others and compassion impress Jane much more than his rigid machismo did.

In Carl Hiaasen's *Hoot* (2002), the protagonist is Roy Eberhardt, a new boy in his Florida school who gets bullied on the school bus every day by Dana Matherson, an older student who is huge and muscular and calls Roy names like "cowgirl" (ch. 2, p. 14; ch. 14, p. 169). When Dana tries to strangle him, Roy punches the bully in the nose and wins respect from his fellow Trace Middle School students (ch. 2, pp. 14-15; ch. 4, p. 38). However, Dana does not give up trying to intimidate Roy. Hiaasen also develops a mystery surrounding a stranger Roy's age who lurks near the Coconut Cove restaurant construction site and creates havoc to save the local burrowing owls. Roy befriends the stranger and assists him. Roy also gets to know Beatrice Leep, a strong and fearless soccer player. She turns out to be the half-sister of the mystery boy. When Dana traps Roy in a janitor's closet after school, Beatrice saves the protagonist from being strangled and leaves Dana "stripped down to his underpants and trussed to the flagpole" of Trace Middle School (ch. 10, p. 111). Beatrice's punishment of macho Dana for terrorizing Roy seems like poetic justice to readers and defies the typical image of helpless women in the mass media. Eventually, Dana winds up in jail.

Roy tells his history class about the burrowing owls and the restaurant construction that is jeopardizing their habitat. The other students and the teacher, Mr. Ryan, are also upset (ch. 18, pp. 244-48). Trace Middle School students, including Roy's history class and Beatrice's soccer team, come to

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protest the groundbreaking ceremony for the restaurant (ch. 20, pp. 259-74). Roy and his father discover that the construction project's file has no Environmental Impact Statement (ch. 21, pp. 279-81). Local reporters expose the felonious conduct of the restaurant chain's head. As a result, the chain abandons plans to build on the Coconut Cove site. Roy and Beatrice make national television news (Epilogue, pp. 282-84). By the end of the novel, Roy feels like "a real Florida boy" and not like an outcast (Epilogue, p. 292). He has progressed from being the target of a bully to being a national hero.

Hoot has third-person omniscient narration and many characters. Its complex plot requires a good reader to follow. The novel focuses on social criticism. Hiaasen persuades children to consider many flaws in our society, from the middle school administrators' half-hearted attempts to deal with bullying to corrupt businessmen's suppression of an environmental impact analysis that criticizes the restaurant's potential habitat destruction. Hiaasen also shows children that their informed efforts can make a difference in shaping public policy.

However, the novel has flaws in the depiction of Roy and in its portrayal of children acting without adult help. Roy uses lies and other questionable strategies to get Dana into trouble. Roy's weak ethics somewhat undermine readers' respect for his courage and intelligence. Hiaasen's contrast of befuddled adults with smart, heroic children certainly appeals to youngsters; however, in the real world, young people need more adult assistance with serious problems than they get in this book.

Also, the women characters in *Hoot* approach caricatures. We never get many details about Beatrice Leep's soccer games, but we know that she can bite a hole in a bicycle tire and wallop boys much larger than she is. Beatrice is a caricature of a woman jock. When Roy lies to cover up his role in supporting ecological terrorism, his mother seems too gullible. Most parents know their children well enough to detect at least some lies. When describing the vice-principal Miss Hennepin, Hiaasen focuses on one hair above her lip, rather than on her values. While she does not punish the bully Dana and forces Roy to write him a letter of apology, she does believe Roy's account of the attempted strangling when she sees the bruises on Roy's neck, so she has some sense of justice (ch. 2, pp. 19-21). *Hoot* would be a stronger novel if Hiaasen developed the women characters more fully, instead of barely sketching them.

Joseph Bruchac's *Bearwalker* (2007) focuses on a Native American eighth-grade student named Baron Braun who gets bullied because he is short and is a Mohawk. However, Baron's intelligence, bravery, and knowledge of bears enable him to solve a mystery and save the lives of his classmates, his teacher, and other adults when they are threatened during a wilderness camping trip by a violent, psychotic man who has become the Bearwalker of Native American legends. This novel is full of suspense and will keep readers turning pages rapidly. By the end of the story, Baron has won the respect of his fellow students and has proven to himself that he is a worthy member of the Mohawk Bear Clan. His body reflects his inner growth by becoming taller, and Baron joins his junior high school's basketball team.

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Native American himself, Joseph Bruchac captures in *Bearwalker* the frustration of a person who gets judged by the color of his skin and his height instead of his inner strengths. Bruchac presents the novel as Baron's journal, and this first-person perspective helps readers to understand Baron's rich Mohawk heritage and its cultural wisdom. This book could inspire good discussions of the strengths of the many ethnicities and cultures that comprise a nation.

Bruchac depicts the gang of three male bullies at Baron's school as crude, "self-satisfied," and brainless. Baron describes their reaction to successfully tripping him as he goes out for recess: "they're all enjoying the spectacle of me flattened on the sidewalk like roadkill" (ch. 1, p. 10). In contrast, another student, football star Cody Campbell, rescues Baron from the bullies (ch. 1, pp. 11-13; ch. pp. 5, 54), and classmate Tara Moody praises his bravery and gives him a tissue to wipe up his bloody hands (ch. 1, p. 13). Bruchac demonstrates that bystanders can make the choice to help and support victims of bullying. Both Cody and Tara, who are Caucasian, focus on Baron's being a valuable person, instead of obsessing about the ways that he differs from them. Baron also likes his teacher Mr. Wilbur, who realizes that Baron is a fellow intellectual and that they both share a love of nature. Also, both the teacher and his student sense danger during the class camping trip and instinctively dislike Walker White Bear, a white man at Camp Chuckamuck who is posing as a Native American (ch. 3, p. 41; ch. 4, pp. 46-51; ch. 7, p. 74; ch. 8, pp. 76-82; ch. 10, pp. 92-98; ch. 12, pp. 105-111; ch. 13, pp. 116-17). When the other adults finally realize the danger, they send Baron out to phone for help (ch. 18, pp. 149-55). Despite being wounded by a shotgun and a bear, Baron succeeds in his quest.

Baron's parents had explained to him that Mohawks have survived in a dangerous world because they are both tough and smart (ch. 4, pp. 44-46). Mohawks also respect the natural world (p. 45). Baron uses what he has learned from his parents and Mohawk culture to outwit the Bearwalker.

Bearwalker appeals mostly to boys because of its emphasis on being tough. Some of the scenes are rather frightening and may overwhelm sensitive children, especially when the Bearwalker pursues wounded Baron through the hills and forest (ch. 21, pp. 172-78; ch. 23-24, pp. 189-96).

Conclusion

All of the novels analyzed in this article would be effective tools to teach children, parents, teachers, and other adults about the issues surrounding bullying. These books would prompt good class discussions and raise young people's awareness of the importance of respect for others, the value of differences, the problems caused by bullies, and the need for peers to intervene when bullying occurs. Targets of bullies, bystanders, and perpetrators would benefit from such discussions and from writing essays or stories about bullying. These books can help us to transform our schools into safe environments that foster non-aggressive problem-solving and cultivate the self-esteem of all students.

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THE ROLE OF LANGUAGE IN THE TEACHING OF ART AND DESIGN TO VISUALLY IMPAIRED PUPILS: A CASE STUDY OF COPOTA SCHOOL FOR THE BLIND IN MASVINGO DISTRICT IN ZIMBABWE

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Abstract: *Learners who are visually handicapped face unique challenges in the education system or precisely in the learning of art, particularly those who were born blind. Yet with more radical changes to teaching and medium of instruction, learners who are blind can perform to their maximum potential. This study focused on establishing how language as a medium of communication can enhance or impede the acquisition of art skills and content. It also aimed to establish which form and type of language is effective and to what extent. A qualitative research paradigm was adopted as suitable for this case study of Margreth Hugo School for the blind in Masvingo province in Zimbabwe. Purposive sampling was employed to select two teachers and their classes, that were observed teaching art and for the interviews. Therefore three data collection methods namely, observation, interviews and document analysis were used. Results among other things indicated that language, first or second, is critical in the teaching of art to the visually handicapped. Visually handicapped learners can learn and make some form of art regardless of their situation. Recommendations have been brought forward to develop a rich adjectival dictionary that can enhance description of art works and art skills to the visually handicapped.*

Key words: *visual impairment/handicapped, language*

Background

Art as a discipline in the education system is meant to be appreciated using one's sense of sight. It is of interest to note that this discipline is also done and appreciated by those who are visually handicapped.

The first school for the visually handicapped was established in 1791. Children identified as requiring special provision tended to receive training rather than an education, the aim being, to

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give them access to employment and to enable them to become productive members of the society.

The 1981 and 1993 Education acts define special educational needs as significant learning difficulties or as impediments to the use of the same educational facilities as others (Fish and Evans 1995).Nowadays, all children are entitled to education appropriate to their needs. A child may receive education in any one of many situations, such as at home, mainstream school (nursery, primary, secondary), special school and hospital. In all of these places a child may receive attention from a teacher. Margaret Hugo school for the blind caters for pupils who have special education needs. Today the visually handicapped are put in formal schools to get education that empowers the individual after school.

Art deals with all human senses e.g. touch, smell, taste, sight and hearing. It is quite interesting to note that the visually handicapped have transferred their sight to their hands and ears. 'In fact they see with their hands and ears', in other words, they have a strong sense of touch and hearing. They appreciate the beauty of the artifacts they make through touch and listening. The teacher then plays an important role in using language to explain to pupils how beautiful the artifact is. The students have to appreciate beauty through what the teacher tells them. The teacher employs technical language to explain beauty. Language plays a very crucial role in teaching the visually handicapped children. It is language that is used which enables these pupils to appreciate artifacts they make. This only means that the teacher should have a very good command of language which can either be English or any other indigenous language. Mostly, English is used as a medium of instruction during teaching.

At times it is necessary to use an indigenous language where pupils do not understand English and let the learners touch where words equivalents cannot be obtained to describe. This helps pupils to get a good understanding of the subject. In addition, instructions should be very simple and straight forward in order for pupils to be able to follow. Therefore, language, exoglossic, endoglossic, non-/ verbal is critical in communicating with the visually handicapped.

Conceptual Framework

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Visual impairment is a general term that describes all degrees and types of blindness irrespective of its cause and the age at which it was acquired. However, a number of variables (degree, type, cause and age of onset) combine in a student with sight loss to produce a unique impact upon the student personal, intellectual and educational development (Ashman & Elkins, 2009). In some instances, sight loss can be accompanied by one or more of the other disabilities or impairments, any combination of which has profound implications for life and learning for the individual possessing them.

The term, 'blind' signifies a more severe degree of sight loss. Although the word is used inconsistently, 'blindness' usually denotes "the inability to see and perceive through sight" (Gallaudet Research Institute, 2007). This means visual impairment that is so severe such that the child is unable to receive and process visual information through sight, with or without aid and that adversely affects a child's educational performance (Gallaudet Research Institute, 2007). One characteristic of children who are visually handicapped is that they may have little or no mental imaging at all depending on the severity of the sight loss and the age of on set.

Different visual impairments lead to different levels of sight, and but even people who are congenitally blind can perceive visual images by tactile or auditory means. Given proper training, blind people can understand and recreate in two-dimensional drawings using either a pen or raised line drawing boards. They can create two-dimensional renderings of shapes they have felt in three dimensions, and can create mental images of objects they have experienced through tactile graphics or verbal description.

Verbal description is central and most frequently used in informing a visually handicapped learner about the environment and content of an art work. S/he therefore depends on the interpretation, translation or personal understanding of the sighted, the teacher. Language Interpretation and translation has its own challenges and constraints. Robins (1980) posits that there is usually content loss or gain in interpretation and translation due cultural inhibitions. For instance, a description of a sexuall scene in *chishona* would be politely and ethically expressed as " *vanhu vari pabonde*" [People on a reedmate](literal translation).

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In the United States of America organisations like Art Education for the Blind (AEB) is committed to making the visual arts accessible to the visually handicapped population by producing educational programs that utilize multi-sensory methods such as touch and sound. The program uses tactile diagrams, in-depth narratives, and atmospheric sound compositions to explain many examples of art works; both painting and sculpture are included in the series. Some works of art are especially complex and therefore these examples must incorporate several different types of raised patterns in order to fully describe compositional and stylistic details. While visually handicapped art learners in these developed countries have the pleasure and access to such medium, their counterparts in the third world countries such as Zimbabwe have to depend on the descriptive prowess of the teacher which means that the teacher plays a very crucial role in explaining to pupils.

A similar project in Birmingham, England called "Sound and Touch" has collaborated with "Art History through Touch and Sound" which explains the space and environment of selected English cathedrals. The sense of touch and hearing are important alternatives to the learner who has no sight. Therefore, these (sound and touch) should be utilised to fullest potential.

In Japan, Workshops at Azabu Art Museum in Tokyo were organised by Yohei Nishimura who wrote a fascinating book ("Let's Make What We've Never Seen'). These were attended by visually impaired people, some partially sighted, some totally blind, the partially sighted and a number of fully sighted people wearing blindfolds. It was very interesting to see the level of ability the participants had acquired with touch and also the scale that they were working with. They were working with massive pieces of clay in many cases.

The success of touch art in Japan stems less from the considerable support given to art teachers working with visually handicapped people by the education system, and more from the fact that the artists/art teachers themselves are very accomplished people and quite often come from an exceptionally rich ceramic tradition, and have very good linguistic background. Therefore once again language is pivotal in aiding perception of visual objects to the visually handicapped.

There are several methodologies used with people who are visually impaired. People who are completely visually handicapped often choose three-dimensional modalities, such as clay or

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papier-mâché, or raised line drawing boards. Contrary to popular belief, many visually handicapped people are interested in color. Visually handicapped people want to learn the differences between what is conveyed by different colors, not only to understand art, but also to use color in their own artworks. Visually handicapped people work in different styles and use different media, ranging from sculpture to photography. People who have lost their vision or have partial vision include famous artists such as Monet and Van Gogh, Monet and Vincent Van Gogh are renown impressionists and post impressionists who have worked with intricacy of colour. Monet (1877) "*The Gare St Lazare in Paris*", VanGogh (1889) *"A Cornfield with Cypresses"* are some examples of impressionist movement painting.

Plato's idealism suggests that the real art is not in the eyes but in the mind. Conceptual art is entirely different yet still creative. Readymade objects have often been displayed in art settings, the most famous being Marcel Duchamp's 'Fountain'. Vision isn't needed to produce this 'thinking art'. Deconstructionism is heavily dependent on the artist prowess to use language and give meaning to artworks.

Bressler (1994) states that how we as readers make meaning out of or from the next or work of art will depend upon mental framework that each of us has developed concerning the nature of reality. This framework or worldview consists of the presumptions or pre suppositions that we all hold (either consciously or unconsciously concerning the basic make up of our world.

The teacher or the colleague who is sighted acts as the practical critic rendering interpretation and analysis of the artworks. The practical critic according to Bresslle r (1994) defines the standards of taste and explains, evaluates or justifies a particular piece of art. Thus the interpretation presented to the visually handicapped depends on the social cultural philosophical and psychological background of the viewer. Literary theories differ widely. For example, one theory stresses the work itself, believing that the text alone contains all the necessary information, the elements, colour, form and technique. The other theory places a work of art in its cultural, historical and or sociological setting. Therefore the artists and its audience can concur on the interpretation. The other theory places emphasis on the texts audience. Therefore the literary theory which the teacher operations from consciously or unconsciously, informed or uninformed, eclectic or unified has a great bearing on the visually handicapped learner.

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Therefore a logical and clearly articulated theory enables the sight gifted reader to establish interpretations consistent and objective.

There are many reasons for teaching visually impaired people about both art history and the making of art. Sighted and visually handicapped people benefit both from the critical thinking skills, language skills, cooperative learning, and general life enrichment provided in history. Studying art making can serve to foster sensory awareness, manual dexterity, self-confidence, and self-awareness. Above these benefits the visually handicapped individuals get braille-reading skills, mobility and map-reading skills, and tactile-exploration skills, all of which contribute significantly to a person's academic and professional success. Therefore being versed in visual culture, language and contributing to it, helps visually handicapped people to break through social barriers and enables their full participation in the art world. Regardless of all the benefits and efforts being made to teach art to the visually impaired, many circles still think art is a practice or profession often given up with sight loss: it is visual after all.

Research Objectives

This research study was therefore guided by the following research objectives. The study aimed at:

- establishing to what extent language can hinder or enhance the teaching of art,
- identifying which type or form of language facilitated art teaching; non-/ verbal, first or second language, and
- recognizing how and to what extent visually impaired art learners perceived visual images.

Methodology

A qualitative case study research design involving Margret Hugo school for the Blind commonly known as Copota in Masvingo province, Zimbabwe was used in this study. According to Borg and Gall (1989), case studies are done for the purpose of either producing a detailed description about a phenomenon or developing possible explanations of a phenomenon or evaluating a phenomenon. Qualitative research paradigm seeks to understand human behavior from the

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actors' own frame of reference (*emic*). Hence, this study seeks to understand the 'cultural' context of the people involved in the teaching and learning of art. Therefore, a case study was found suitable for its in-depth descriptive function.

Borg and Gall (1993) suggests that purposive sampling can be used in selecting the sample for a case study by identifying and selecting subjects more likely to be knowledgeable about the phenomena understudy. The school has an art special teacher therefore he was selected purposefully as one of the two interviewees sampled. The second interviewee was randomly selected as the whole school has special needs educators with visually handicapped learners in their classes.

The researchers used observations, interviews, questionnaires and document analysis as means of collecting data. The study also used the document analysis method of data collection. Marshall and Rossman (1999) view document analysis as a method for describing and interpreting the artifacts of a society or social group. The content analytic approach was used to analyse artworks by the visually handicapped learners. Short interviews as suggested by Chivore (1990) were used to aid document analysis for enlightening the evaluators on the culture, socio-politics and socio-economic educational background of the visually handicapped art learners.

Findings

From the data collected, respondents expressed different views on the value and relevance of language in the teaching of art to the blinds.

Teachers expressed concern on which language to use since the policy advocates for the use of English to higher grades, yet these visually handcapped pupils haven't mastered the basics of the second language due to marginalization. In most cases, teachers find themselves using the learners' first language in order to communicate effectively.

In terms of perceiving visual images, teachers or colleagues have to describe or read an art work for the learners to appreciate a painting or drawing hence they are two steps removed from the artist in visual aesthetics. The process is very similar to translating or interpreting an artwork. There is therefore inevitably as in every translation, content gain or content loss. The truth is

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exaggerated or distorted due to several language translation problems. The learner, during the translation process does not get the true aesthetic appreciation s/he could have felt him/herself.

The language used in describing an art employ technical terms of the subject in visual aesthetics which could be in most cases difficult to get the vernacular equivalent and teachers end up borrowing terms, coining and adopting new terms and meaning is lost along the process, for example words like tone or shade.

To those born blind it is difficult to explain and describe everything without giving examples of equivalence they have never seen. For instance, describing colour such as red, one can never say like blood because they have never seen that.

The totally blind, depend totally on the verbal comments and instructions given by their teacher and colleagues. They depend on the teacher's expertise that has to give a detailed description of how beautiful the artifact is and should be able to do that in a manner that appeals to the learner's sense of beauty. The teacher's description should compel the learner to believe that the artifact he or she has made is beautiful. The teacher uses adjectival phrases to describe beauty. Appreciation which is an aesthetic skill is derived by faith in the teacher. They believe what the teacher says. The teacher should therefore have a good command of language.

Learners were observed tearing paper in preparation for pulp to make papier-mâché, therefore, learners who are completely blind often choose three-dimensional modalities. There were also samples of baskets, reed weaving, collage which the blind learners constructed on their own with ease and perfection.

A blind, deaf and dumb learner, who was observed, managed to mould a human figure on a pallet though with full assistance of the teacher. The pupil demonstrated that she had mastered elements of line, shape and form to some significant level though not perfect. She mould a round human head using plasticine and the rest of the body, hands and legs using string as the graphic line. The human figure image was created with relative proportions. The principle of proportion was mastered to a certain degree because the hands were represented proportionally smaller to the legs and the size of the head was in proportional harmony to the body.

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The teacher's involvement in giving instructions to visually handicapped and deaf learners is critical and greater than just to a blind learner. The instructions are hands led. The communication is non- verbal throughout. The teacher holds the learners hands and directs them to different body parts at a time to inform which part they are constructing. Perception is through touch. It is the sense of touch that informs them of elements such as texture, line, shape, form, only if it is relief or raised art or 3 dimensional arts. Elements such as colour, tone and value are non achievable. Principles of space, balance and dominance are perceived the same way. The teacher directs the learner's hand each time to a surface or object which the learner should perceive. Through non-/ verbal language the learner is instructed to reconstruct the image. Teaching and learning of this nature is time consuming and cannot warrant the inclusive learning syllabus coverage. Therefore, learning of art in these instructional conditions to these physically challenged learners is not examination oriented.

The teachers acknowledged that they give home work tasks, for example, to collect beads and other raw materials for crafts in the next lessons. The types of homework given are not cognitively challenging because blind learners require monitoring and immediate feedback in their actions. That communication is centered on an expert special education teacher.

Therefore there are challenges of inclusion, examination and assessment. The examination system to date in the country does not cater for the blinds in content and structure. Literature for other subjects has already been transcribed in Braille but no images have been developed with raised relief to cater for the tactile perception of the visuals

Conclusions

Verbal or non verbal language is very important for imparting knowledge and giving instructions to the blind art learners. Therefore, language used should be appropriate to the learners for it is only through language that visually handicapped learners can acquire skills or concepts of doing art. It is language that can hinder or enhance learning of art to visually handicapped learners.

It can also be concluded that regardless of physical limitations, learners with visual impairment can learn some form of art to a significant level of perfection with proper non-/ verbal instruction.

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Learners with visual handicap can best perform in certain types of arts and crafts. They will perform best in 3 dimensional arts like sculpture, basketry, weaving, construction, papier-mâché where the sense of touch is the mainly used means of perception combined with proper use of descriptive language.

The perceiving and making of 2 dimensional arts such as drawing and painting heavily depends on mental imaging and is a toll order to the blind art learner especially one born blind. There is heavy dependence on building from what the art learner has already conceptualized or has already created (a schema) basing on prior experience or verbal descriptions acquired. Therefore, creating vivid and accurate mental images through verbal descriptions is difficult given the aforementioned constraints of language, translation and culture.

The teaching of art to the visually handicapped is depended on the teacher's prowess in non-/ verbal language. The teacher has to be highly skilled in language and art skills involved. It is from the adjectival words or phrases which the teacher uses which can help the art learners recreate and create mental images of art works. If the teacher fails to describe the colour blue, red, yellow, the learner will fail to conceptualise these colours. Whether exoglossic, endoglossic or non-/verbal language is used as medium of communication, it is important to ensure that there is effective transmission of information from the teacher (sender) to the learner (receiver) (Lasswell, 1947).

Recommendations

There is serious need for training special needs art teachers who are highly competent in both the skill and grammar of art. That is, those teachers who can equally talk about art as much as they can do it.

Teachers and artists need to research, create and agree on tactile forms that can infer abstract elements such as colour, tone and value to enhance communication through the sense of touch.

Linguists and artists need to research, agree and develop a dictionary of technical lexicon and phrases which can be used in art to effectively communicate across ages and cultures. In cases where the terms are not available for equivalent translations, consensus coining, borrowing, adoption and adaptation can be done.

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Institutions with visually handicapped art learners should invest in providing paintings and art literature with braille signage because non-/ verbal means of communication is not comprehensive on its own given the limitations discussed above.

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Mainstreaming Peace Education in Secondary School Curricula in Nigeria

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Abstract: *The growing culture of violence in the secondary school system in Nigeria has continued to negatively affect the environment of teaching and learning. The common effects of this trend include poor academic performance, low staff productivity, tensions, broken social relationships, high incidents of students and staff turn-over among other factors. Addressing the problem of conflict and violence in the school system simply requires a non-violent approach. This study therefore examined the compelling need for the mainstreaming of peace education in secondary school curricula in Nigeria. This is because peace education possesses the methodical capacity to systematically eliminate the culture of violence in the secondary school system. A set of educational objectives are to be met by this curriculum in terms of constructing a culture of peace in the actors in the secondary school system in Nigeria. These objectives include equipping learners with knowledge and understanding of issues of conflict and peace, attitudes and values conducive to peaceful living, skills and abilities for resolving conflict. In sum, the adoption of the curriculum would assist in the building of peace capabilities of students, teachers and administrators in the secondary school system, which will assist them to resolve conflict with non-violent techniques.*

Key Words: *Peace Education, Conflict, Violence and Curriculum for Secondary School*

INTRODUCTION

Education remains the most viable tool for the transformation of human behaviours and development of the society. It is also the vehicle for engineering the behaviours, attitudes and skills of individuals towards empowering them to positively contribute not only to their personal growth but also to the development of the society. This is the reason why Akusoba (2002) refers to education as "the most reliable instrument of social mobility and cohesion, one of the essential determinants of the destiny of a nation in terms of social, political and economic development." Consequently, no nation can develop without education, but education can only achieve its desired goals in an atmosphere that is conducive. It is a truism that conflict remains one of the greatest threats to sustainable growth and development of the educational system especially at

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the secondary school level, which this paper focuses on. Conflict has been *a clog in the wheel* of the progress of the secondary school system the world over. Consequently, Basky (2003) has confirmed that "the process of teaching and learning (in school) is fraught with conflict." Conflict is inherent in the activities that take place in the secondary school system whether in the classroom between or among students, or between students and teachers or between one teacher and another teacher or sometimes between school administrators and teachers or students and at other times between parents and teachers.

However, the ubiquity of conflict within the secondary school system should not be viewed as a misnomer but rather as an integral part of the school system which arises as a consequence of the convergence of different actors who pursue different and sometimes incompatible interests and goals. It is a fact that where ever there are interests and goals to be achieved, there exists conflict. In this regard, DiPaola and Hoy (2001) have noted that "conflict is indeed on the daily menu of school administration." It is also widely acknowledged that violence against teachers, other students, and destruction of property both in the learning institution and surrounding communities has greatly increased in the past years (Onsarigo, 2007). Conflict is part and parcel of the school and the school cannot shy away from it, because it is experienced daily in the teaching and learning process (Beggy, 2003).

Conflict as a phenomenon in schools is thus embedded in the web of school activities and by extension in the school culture and this reality makes conflict inevitable in the school system. Therefore, any attempt that is made to resolve or manage conflicts in the school system that is not focused on tackling the culture of violence in the system is doomed to failure and can never achieve or create the needed atmosphere for effective teaching and learning. This is why most writers in the field of conflict management recognise that workplace conflict is inevitable, and if unresolved, has negative impacts that reach far beyond the principal parties (Wilmot & Hocker, 1998). In actual fact, school conflict can be counter-productive to the efficient running of the school system. This is the reason why research findings have revealed that unresolved and poorly managed conflict is the major blockage to school development (Canavan and Monahan, 2001). It is therefore imperative that conflict in the school system should be managed through non-violent techniques with a view to increasing the level of productivity in the system. More importantly, the increasing cases of conflicts and youth violence in secondary schools across the country have necessitated the urgent need to address this escalating problem through a proactive and effective nonviolent strategy.

Based on the above background, this paper examines the imperative of mainstreaming peace education in secondary school curricula as a strategy for dealing with the culture of violent conflict in the system. This is occasioned by the fact that peace education deals with the adoption of non-violent techniques for tackling violence in societies or institutions where an over-dose of violent conflicts exist and would effectively annihilate those conflicts that threatens the efficient running of the school system.

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Literature Review

Conceptual Elucidation on Peace Education

Peace education has recently gained attention all around the world (Yilmaz, 2003). This is because of the increasing recourse to the use of violence in responding to conflict or disagreement between individuals, groups, communities and countries. The concept of peace education has attracted numerous definitions and has been seen from different point of view. For example, Gumut (2006) perceives peace education as the deliberate attempt to educate children, youths and adults in the dynamics of conflict prevention and promotion of peace making skills in homes, schools, and communities throughout the world, using all the channels and instruments of socialization. To Fisk (2000), peace education is described as a process wherein people learn ideologies, values, attitudes, more standards, sensitivities to others and new perceptions such that they are moved to take different actions from which they did in the past. On the other hand, Oshita (2006) believes that the aim of peace education becomes not just educating for peace but educating for a 'peace capacity'. Peace education is essentially a peace empowerment strategy which mainly equips individuals with the knowledge and skills to prevent and manage conflict at intra/inter-personal or intra/inter-group levels. Thus Salomon (2002) has pointed out the main activities of peace education:

- As a matter of changing mindsets;
- As a matter of cultivating a set of skills;
- As a matter of promoting human rights (particularly in the Third World Countries); and
- As a matter of environmentalism, disarmament, and the promotion of a culture of peace.

Fundamentally, peace education aims at building the peace capacity of people so that they do not only learn to resolve their conflicts through peaceful dialogue but to also live in peace. Similarly, Momodu (2009) posit that peace education is a behavioural and attitudinal change mechanism which aims at: pre-empting conflict (build-up); preventing conflict outbreaks; resolving conflict and promoting a culture of peace. Basically, peace education aims at systematically inculcating the culture of peace in the minds of individuals with a view to de-constructing the culture of violence from their minds by equipping them with the knowledge, skills and abilities, which would assist individuals to interact peacefully and to collaborate to achieve collective as well as personal goals.

Based on the above, it is clear that peace education can be used to positively used to eliminate behaviours and attitudes that engenders conflict and violence in any social system including the secondary school system. This is because it has the potential to modify unwanted human behaviours that are inimical to peaceful co-existence by fostering the holistic social,

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psychological and intellectual development of human beings, with a view to helping them to achieve their goals and aspirations in life.

Channels for Propagating Peace Education

Basically, peace education can be taught or advocated through formal and non-formal channels of education (Momodu, 2011). Thus:

- **Formal channels of peace education**: These involves the various educational channels for teaching and learning which are usually employed in the teaching of basic knowledge and skills of conflict resolution, peace-building and peace promotion. Peace education is usually designed or factored into the school curriculum for onward teaching. Formal channels or media of peace education are structured in nature. These formal educational channels are educational institutions or schools like primary and secondary schools (both public and private) and tertiary institutions like colleges of education, polytechnics and universities. Also included as part of these media are conferences, workshops and symposia which can also be employed for teaching peace education.
- **Non-formal channels of peace education:** These involve the various non-formal educational channels and traditional methods of learning which can be employed for people to learn about peace and peace promotion. Such channels are plays, dramas, jingles, prose, posters, handbills, folklores, and stories, Television and Radio programmes, dancing and other cultural methods of learning. Non-formal channels of peace education are usually not organized and controlled in nature but can be very effective for learning about peace and peace promotion.

In sum, King and Miller (2006) argue that:

> Peace education heavily utilises culture and the arts, with its most potent tools found in music, dance, drama, painting, and sculpture…As the broadest sub-field of peace studies, peace education incorporates a wide range of practices aimed at transforming values and norms and informing styles of leadership to bring about or consolidate peace in communities, within a country, in inter-state relations, or at the global level. Because the peaceful resolution of differences requires education at all levels of societies, a broad range of institutions need to address acute conflicts, work toward reconciliation, and strengthen societies to stand against prejudice, oppression, and violence, including mass organised violence.

A combination of both formal and non-formal channels of education for the teaching of peace education can be very adequate and effective for the building of peace capacities of individuals and groups (Momodu, 2011). Therefore, the importance of peace education at the school level is unequivocal for the cultivation of a safe and prospering future for the world. Peace education in classrooms aims at equipping students with necessary knowledge and attitudes through

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respectful, tolerant, participatory, and cooperative techniques and methods (Deveci, Yilmaz, Kardag, 2008).

Definition of Conflict

Wright (1990) stated that the word conflict is derived from the Latin word configure meaning to strike together. The term conflict is viewed in a variety of ways because of its confusion with those conditions which lead to situations of different conflict. Thomas (1976) defines conflict as "the process which begins when one party perceives that the other has frustrated, or is about to frustrate, some concern of his". Conflict actually occurs when there is "real or perceived difference which may affect actions or outcomes that we believe are important" (Johnston, 1991). Robbins (1998) sees conflict as "a process that begins when one party perceives that another party has negatively affected, or is about to negatively affects something that the first party cares about." Conflict is basically about struggle or competition for scarce resources in which each of the party perceives its goal or interest is been contested for by the opposing party. Within the school system as a complex organisation, conflict manifest in various forms. Hence the reason why De Janasz, et al (2001) stressed that conflict is a fact of life in organizations.

Similarly, Dahrendorf (1959) believes that conflict in the organisation creates tension within the organizational system. One may observe such tension by paying attention to possible incompatibilities among departments, staff members or employees, to complexities of the communication network, and even the organizational structure itself. Conflict may be constructive/functional or destructive/dysfunctional. Constructive/functional conflict is most preferable as it brings about beneficial outcomes in the system whereas destructive/dysfunctional conflict brings about dysfunctional consequences in the system. Tschannen-Moran (2001) notes the dysfunctional consequences of conflict to include:

a) Hampering productivity b) Lowering morale c) Causing more d) continued conflicts (e) Causing inappropriate behaviors.

Other glaring negative consequences of conflicts in the school system can be identified and they include poor academic performance, low staff productivity, tensions, broken social relationships, high incidents of student and staff turn-over, injuries, disruption of academic session among other factors. By and large, dysfunctional conflicts in the secondary school system can potentially impede the goals of education, which include:

- Preparing children for citizenship
- Cultivating a skilled workforce
- Teaching cultural literacy
- Helping students become critical thinkers
- Helping students compete in a global marketplace.

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Generally, conflict in the school system if not promptly and carefully handled through non-violent techniques, can impede productivity in the system or even ground the system. Several types of conflicts can be identified in the schools according to Abubakar (2005) these are student-staff conflict, student-student conflict, student-principal conflict and community- school conflict. In details, there are several types of conflict within the secondary school setting, which include teacher-teacher conflict; teacher-principal conflict; student-staff conflict; student-student conflict; student-principal conflict; community-school conflict; teacher-parent conflict; parent-principal conflict and teachers' union-government conflict.

Causes of Conflict in Schools

There are several factors that can engender conflict or break down of peace in the secondary school system. Gray and Strake (1984) identify such factors as: limited resources; interdependent work activities; differentiation of activities; communication problems; differences in perceptions; the environment of the organization. They also noted that conflict can also arise from a number of other sources, such as: individual differences (some people enjoy conflict while others don't); unclear authority structures (people don't know how far their authority extends); differences in attitudes; task symmetries (one group is more powerful than another and the weaker group tries to change the situation; difference in time horizons. Specifically, there are factors that engenders conflict in the secondary schools in Nigeria, which include the leadership style of school administrators; lack of tolerance on the part of teachers towards the students; inadequate school facilities; harsh rules and regulations; indiscipline among students, influence of drug addiction; gangsterism; injustice; favouritism; corrupt practices among teachers and administrators; teachers' absence from work; poor salary; among other factors. These factors have the potential of having devastating effects capable of impeding productivity or in extreme cases lead to grounding the school system

Content of Peace Education Programmes

The success of any peace education programme is dependent on the experiences of the society where the programme would be carried out. Whether the society is experiencing conflict or has experienced conflict or whether it is a peaceful society is of pertinence. Harris (2004) has identified five types of peace education to be: conflict resolution education; human rights education; environmental education; international education and development education. One essential aspect of peace education programme and which was left out in Harris (2004) categorization of peace education programmes, which is very crucial is cultural education. It is important, because culture describes the totality of the way of life of a people. Cultural education brings to fore the shared beliefs and values of a group, community or society, which is essential for the survival of communities and societies as each generation come and go. As such, culture which is the root of cultural education prescribes the values that a society subscribes to. In this regard, cultural education deals with the exposition of certain beliefs, customs, norms and values

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and behaviours which are necessary for the positive growth and development of individuals in their cultural environment as well as outside their cultural environment.

Culture is not individualistic but it is conformist as it deals with groups of individuals. Therefore the inclusion of culture in peace education programmes is important in order to foster cultural integration, tolerance between or among different cultures and the promotion of unity and understanding amongst people in society. Salomon (2002) re-echoes that "peace education is unique because it deals with relations between groups, not individuals". By and large, peace is a culture and a peoples' way of life, which can be promoted or propagated through education as a tool. Therefore, the whole essence of peace education is to promote the culture of non-violence as against the culture of violence in responding to conflict between or among individuals and groups.

Justification for Mainstreaming Peace Education in Secondary School Curricula in Nigeria

The secondary school system in Nigeria is a microcosm of the Nigerian society which is replete with conflicts of various degrees and intensity. Conflict remains one of the greatest challenges confronting the success of the teaching and learning process in secondary schools in Nigeria. The need for the development of a robust and comprehensive peace education curriculum, which will address concrete issues with regards to conflict and its resolution through peaceful means, cannot be overemphasised. This is because a comprehensive approach to peace education in schools will proactively address the issue of dysfunctional conflicts in the school system, which impedes progress and development in the system. Thus, a comprehensive peace education curriculum must focus on tolerance, peer mediation, cooperative teaching and learning in the classroom between teachers and students and between or among students, and training for teachers and administrators, and parents.

Clearly, a holistic peace education curriculum is indispensable in any effort geared towards propagating the culture of peace and eliminating the prevalent growing culture of violence within the secondary school system in Nigeria. The need for a holistic and encompassing peace education curriculum has been reinforced by Bodine & Crawford (1998) who warned that those selecting peace education and conflict resolution curricula should be aware that not all that are labeled as such represent authentic programmes. Nelson, Van Slyck, and Cardella (1999) assert that peace education curricula should be designed to influence knowledge and understanding of peace and conflict, competencies necessary for peacemaking, peacebuilding, and peacekeeping, peaceful attitudes and values, and efficacy and outcome expectancies.

Scholars have also underscored the effectiveness of peace education programmes in tackling conflict and violence in the school system. In this regard, Levy (1989) and Maxwell (1989) have argued that "peace education and conflict resolution curriculum-based programmes are designed to teach students about conflict and alternatives to violence via preventive means such as social skills training, empathy training, anger management, investigating attitudes about

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conflict, and increasing bias awareness. Page (2002) also suggests that peace education should be thought of as "encouraging a commitment to peace as a settled disposition and enhancing the confidence of the individual as an individual agent of peace; as informing the student on the consequences of war and social injustice; as informing the student on the value of peaceful and just social structures and working to uphold or develop such social structures; as encouraging the student to love the world and to imagine a peaceful future; and as caring for the student and encouraging the student to care for others." Similarly, King and Miller (2006) have pointed out the importance of the adoption of peace education as follow:

> Because the peaceful resolution of differences requires education at all levels of societies, a broad range of institutions need to address acute conflicts, work toward reconciliation, and strengthen societies to stand against prejudice, oppression, and violence, including mass organized violence. Churches, mosques, and schools can further peace education, as can village primary and secondary schools and universities and polytechnics.

This paper therefore proposes the mainstreaming of peace education as an independent subject to be enshrined in secondary school curricula to tackle the issues of conflicts and violence in secondary school. This is with a view to creating the harmonious teaching and learning environment that will assist in the realization of the fundamental objectives of secondary school education in Nigeria. Clearly, any peace education programme that will be adequate enough to address conflict in the secondary school system in Nigeria must take into account the historical development of the country, its cultural diversity, changes in the economic environment, its democratic experiences and its current numerous security challenges (terrorism, communal, intra and inter ethnic conflicts, resource based conflicts, religious conflicts) among other issues. Peace education programmes conceived in the above manner would definitely assist in achieving the short and long term goals of peace education which is both preemptive and proactive towards addressing conflict situations. Haris (2002) has articulated the short and long term goals of peace education by noting that:

> Peace education has both short and long terms goals. On the short term, it addresses the sources of immediate conflicts and gives their students knowledge about strategies they can use to stop the violence. In the long term, they hope to build in the students' minds a commitment to non-violence and provide knowledge about nonviolent alternatives, so that when faced with conflicts they will choose to behave peacefully.

The need for mainstreaming peace education in the secondary school curricula is important because the school needs to continue to embark on curricular reform culture so as to enable the various actors in the school system and the society at large to face the challenges of the

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increasing recourse to the use of violence as an option for responding to conflict issues. This study therefore suggests the following peace education curriculum to be mainstreamed in the curricula of secondary schools in Nigeria with a view to re-inventing the culture of peace in the minds of students' right from the secondary school level where it is believed that students acquire and manifest violent behaviours. The UNESCO Seville Statement on violence affirms that "war is not a fatality determined by genes, violent brains, human nature or instincts, but is rather a social invention. Therefore, the same species that invented war is capable of inventing peace." By and large, the mainstreaming of peace education in the curricula of secondary schools will assist in the construction of peace in the minds of the students and the teachers and the administrators which will create the enabling environment conducive for learning in the system.

Curriculum for Peace Education in Secondary School (CPESS)

Course	Content	Methodology	Objective
Civic education	Citizenship, duties, rights and obligations of citizens, functions and processes of government, voting and elections, leadership and followership.	Formal and non-formal channels of education.	Preparing students for responsible citizenship and leadership, and understanding of the efficient functioning of the society.
Culture and diversity education	Meaning of culture and diversity learning to appreciate cultural differences, social integration, interdependence and mutual cooperation between individuals and societies	Formal and non-formal channels of education	Students should appreciate cultural differences and skills to communicate in different cultures leading to acceptance of plurality in our oneness.
Moral and value education	Learning about morality, norms and values, moral standards, rightness and wrongness of conducts and value systems such as tolerance, love, hard work, justice, respect for human life among others.	Formal and non-formal channels of education	Empowering students with sound knowledge of morality and appreciation of the right value system
Human rights education	Learning about legal issues, citizen's rights and freedoms and their obligations, international human rights instruments in promoting, protecting and defending human rights. Political, economic and social justice.	Formal and non-formal channels of education	Empowering students with the knowledge of their rights and their obligations.
Conflict resolution	Learning about the causes and effects of	Formal and non-formal	Empowering students with

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education	conflicts, early warning signs of conflict, conflict prevention and management.	channels of education	non-violent skills of resolving conflict.
Disarmament education	Learning about the danger of arms proliferation, reduction of arms, control and elimination of the usage of arms.	Formal and non-formal channels of education	Students becomes aware of the knowledge of arms regulation and the deadly consequences of arms proliferation.
Non-violence education	Learning about the use of nonviolent alternatives to resolve conflicts e.g. dialogue, peaceful protests and rallies, hunger strike.	Formal and non-formal channels of education	Empowering students with non-violent skills and alternative techniques to responding to violent conflict.
Development education	**D**eveloping human capital potentials of students for economic growth**.**	Formal and non-formal channels of education	Impartation of vocational skills and human capital development in students.
Environmental education	Environmental pollution and conservation, global warming, environmental resource cultivation and distribution.	Formal and non-formal channels of education	Students should appreciate the benefits of nature and protection of the environment.

Source: Field, 2013.

The table above articulates a comprehensive peace education curriculum for dealing with violence and conflict in secondary schools in Nigeria. Generally, the introduction of this curriculum seeks to engineer positive attitudes, increase tolerance and acceptance of others, while seeking to eliminate prejudices and stereotypes, encourage positive perception of “self” and of "others” and enhance conflict resolution and problem solving skills among students, teachers and administrators in the secondary school system.

Conclusion

The increasing cases of violent conflicts in secondary schools in Nigeria is indicative of the fact that the quality of peace education programmes that are in existence in the secondary school curricula is largely inadequate. This is attributable to the practice whereby peace education is taught as an appendage of some other full-fledged subjects. It is imperative therefore, to posit that this practice erodes the effectiveness of peace education and water down its benefits. Therefore, this study has clearly articulated the compelling need for the mainstreaming of peace education as an independent subject in the secondary school curricula with a view to systematically phasing out the current culture of violent conflict which threatens the process of teaching and learning in the system. This is further reinforced by the argument that

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"peace education and conflict resolution education programmes can help schools promote the individual behavioural change required for responsible citizenship, and the systematic change necessary for a safe learning environment" (Bodine & Crawford, 1998). Thus, the adoption and implementation of the proposed peace education curriculum in secondary school curricula will serve as a panacea for tackling the growing culture of conflict and violence in secondary schools in Nigeria.

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THE NON EFFECTS OF USING MUSCLE MEMORY ACTIVITIES AND FADING WORKSHEETS TO TEACH TWO PRESCHOOL STUDENTS DIAGNOSED WITH DEVELOPMENTAL DELAYS HANDWRITING

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Abstract: *The purpose of this study was to evaluate and measure the effectiveness of muscle memory techniques and fading worksheets with handwriting on two preschool students diagnosed with developmental delays in both pre-academics and communication. Two students were selected from a self-contained special education preschool classroom in the Pacific Northwest. All the students in the classroom had special needs usually diagnosed with developmental delays but also included other health impairments, attention deficit hyperactivity disorder, and behavioral impairments age's three to five. The muscle memory activities intervention was used to teach both students how to write their first name. Then, a fading worksheets system was implemented for both students to provide extra practice. In baseline, both students were asked to, "Write your name. Just try your best." During baseline, both students were not able to write any letters of their name legibly. The final outcomes showed little improvement in handwriting ability. Muscle memory activities were engaging for the students but time consuming to implement, did not provide enough practice, and required an assortment of materials. Fading worksheets provided extra practice for the students but were not engaging. Suggestions for using muscle memory activities and fading worksheets with preschool children were not made. Reasons for the differential outcomes of muscle memory activities and fading worksheets were discussed.*

Keywords: *muscle memory, preschool, fading worksheet, single case research, developmental delay, handwriting,*

Introduction

Handwriting is an essential skill in every student's school experience, but it is under taught in the classroom. Approximately 30% to 60% of a typical school day is devoted to fine motor related activities primarily involved with writing tasks. (Graham, 1999; McHale &

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Cermak, 1992). Formal handwriting instruction can begin as early as the kindergarten year (Zaner-Bloser, 1994).

Review of Literature

Intervention strategies for handwriting that incorporate prepositional, spatial, and temporal concepts should be made developmentally appropriate for the child. Verbal prompts are often used to encourage correct directional stroke formation with letters regardless of the child's age. Prompts include "on top of the line," "above the line," or "between the lines" are typically used in handwriting curriculum. (Benbow, 1995). The age at which the typically developing child begins to understand the term "in" is at 2 years. Additional concepts are learned as the child grows older with the most challenging term acquired by the typically developing child at 4 years and 8 months with "back/front" (Johnston 1988). The importance of understanding the developmentally appropriate concepts can help teachers monitor their own students to modify or adapt their handwriting instruction to best suit the needs of the classroom.

A classroom can incorporate handwriting instruction in a variety of opportunities. It is most beneficial for the learners to practice writing in a functional approach instead of solely through isolated practice (Graham, 1999). Providing functional techniques helps the child to generalize the skills learned. Handwriting instruction has also benefited from the use of free-play as a consequence. Hopkins Schutte, and Garton, (1971) conducted a study with kindergarten children and found that gradually decreasing work time and instead engaging in free-play in a playroom could increase the rate of letters formed per minute. There were no systematic increases in the rate of errors associated with the change of instructional and play time. Studies have also been conducted using various teaching strategies to improve the handwriting of students. Systematic instruction with prompts, tracing, praise, and task analysis has been shown to be effective for teaching children with disabilities to write their name (Caletti, McLaughlin, Derby, & Rinaldi, in press; LeBrun, McLaughlin, Derby, & McKenzie, 2012; Morris, McLaughlin, Derby, & McKenzie, 2012; Park, Weber, & McLaughlin, 2007). Token reinforcement strategies using the mean number of legible letters written by ten special education students with behavior disorders made significant gains in their handwriting as noted through teacher ratings, and for both frequency and legibility (McLaughlin, 1981). Comparisons were made between a two groups of students with behavior disorders and between general education and special education student legibility in handwriting.

The purpose of this study was to evaluate the effectiveness of the muscle memory activities paired with fading worksheets in a preschool setting with two students diagnosed with developmental delays in both pre-academics and communication. The goal of the study was to

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have both students from the self-contained preschool classroom learn to write their first names using all uppercase letters independently.

Methodology

Participants and Setting

Two preschool students who were both diagnosed with developmental delays served as the participants for the study. Participant 1 was an adopted five-year-old boy with developmental delays who qualifies for both pre-academic and communication categories. Participant 2 was a five-year-old girl also with developmental delays in pre-academic and communication.

The study took place in the Pacific Northwest at an elementary school in a self-contained preschool special education classroom. The preschool day was split into the morning class with nine students and the afternoon class with eight students including the two participants. The afternoon class enrolled eight students at the start of data collection, then one student joined, and there were a total of nine students at the end of data collection. A majority of the students in the classroom were diagnosed with developmental delays. Although the diversity of the disability population within the classroom included autism spectrum disorder, attention deficit hyperactivity disorder, and behavioral impairments. The multidisciplinary team which included professionals such as speech pathologists, occupational therapists, and physical therapists all worked closely together within the classroom alongside the teachers and instructional aides. In the classroom there were individual cubbies with the names labeled for the students to hang up their backpacks and coats. There was also a sectioned off table area that faced a wall for one-on-one independent work with the teacher or assessment purposes filled with a large box with reinforcing toys. There was a carpet area used for circle, free play, physical therapy exercises, and gross motor activities. There were two large tables used for snack, art projects, play dough, kindergarten club, and free play table activities. In the corner of the classroom, there is a housekeeping area with a kitchen set, table, and chairs. There was a sensory area with a large birdseed box and two blue tables used to put sensory items and water in. There was a sink and makeshift kitchen area used for students to wash their hands in preparation for breakfast or snack and to assemble the food items. In the housekeeping area, there were dolls, pretend food, dog care, and birthday parties for free play options. The data was collected during kindergarten club, physical therapy exercises, or at the start of free play. The sessions lasted approximately 15 to 20 minutes in the classroom. At the start of the study, the sessions took place in the housekeeping area away from the kindergarten club and physical therapy exercise areas. However as the study continued, the sessions transitioned to the independent work table area. Both participants and the researcher were seated at a table facing the wall sectioned off from the rest of the classroom. The move was done to increase on-task behaviors while minimizing distractions from the peers and other activity in the classroom.

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Materials

There were a wide variety of materials used with the muscle memory techniques. The materials used with every session were blank sheets of plain white paper and a marker. There were different materials required depending on the muscle memory activity for the day. Materials necessary for muscle memory activities included: stickers, changeable/magic markers, play dough, glue-able items (i.e. old candy, marshmallows, beads etc.), bingo dot markers, finger-paint, sheet protectors, and vis-à-vis markers. Data was gathered using a data collection form (See Appendix A).

Dependent Variable and Measurement Procedures

The purpose of the study was to increase Participant 1 and Participant 2's ability to write their names. Based on the baseline testing data, both students did not exhibit the knowledge or show any concept of how to write any letter of their first names. All data was scored using the same measurement procedure. Two points were awarded for each letter learned of the student's name. One point was given for the appropriate slant and the second point was for formation regarding how legible the letter was. For Participant 1 and 2 there were a total of eighteen sessions conducted after baseline. The data was scored using the permanent products that the students independently completed using all uppercase letters at the end of every session. The permanent product contains letters learned in previous sessions in addition to the current letter that the student is working on.

Experimental Design and Conditions

The effects of using muscle memory techniques and fading worksheets were evaluated in changing criterion designs. For Participant 1, the experimental design was a changing criterion A-B-A-C design (Kazdin, 2010). With Participant 2, the experimental design was a changing criterion plus an A-B-C-D-E-F design. Baseline data were taken for each student. Then, for both Participant 1 and 2 a muscle memory activity was implemented. For Participant 1, it was then paired with a fading worksheet, and then a reversal back to simply muscle memory activities alone, which finally led to muscle memory activities in conjunction with a separate fading worksheet. With Participant 2, the muscle memory activities were paired with a tracing worksheet followed by four implemented fading worksheets.

Baseline. Baseline was taken for each student separately. During baseline, every student was given a marker, a blank piece of plain white paper, paired with the same verbal prompt to, "Write your name. Just try your best." This condition lasted for one session for both participants.

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Muscle memory activities. After baseline, muscle memory activities were implemented working with the initial uppercase first letter of the participants' names. The researcher would present the muscle memory activities to the participants along with the necessary materials. The researcher would model how to write the letters with the correct directional strokes by using her finger to trace on top of the letter paired with the verbal directions. For instance with the letter "G" the researcher would verbally state, "First we start at the top. Then we go around. Then we stop. And then we go in the garage." The researcher would then instruct the participant to copy the motions with the verbal prompt, "now you do the same" while the researcher reiterated the correct directional strokes out loud to re-emphasize with the movements. Next, the researcher would model and verbally state the directions on how to complete the muscle memory activity itself. Then the participants would follow the directions stated previously while the researcher verbally restated the correct directional strokes out loud while reinforcing the participant with specific praise. After the first half of the study, the researcher would then put away all the materials from the activities leaving only a blank piece of plain white paper and a marker on a blank table. When the researcher instructed "now write me the letter (insert letter of the day)", the student would then use the marker of his/her choice to write the letter of the day independently from memory. Similarly, the researcher would take away all traces of the written letter away from the table. Finally, the researcher would instruct "now write me the letter(s) (previous letters learned from the study) and the letter (insert letter of the day)." After session eight for Participant 1 and after session seventeen for Participant 2 there were black lines on the plain white paper given to the participant where they were expected to write the uppercase letters on the line. The researcher would then examine the permanent products of both participants and assign the total number of correct letters written based on the number of letters assigned for that day.

Fading worksheets. Based on the results of the muscle memory activities alone, the researched incorporated fading worksheets for extra practice with the letters. In the beginning, Participant 1 and 2 had different fading worksheets to emphasize different areas that the students needed improvement on initially. By the end of the study, both participants had similar fading worksheets which When the researched presented the fading worksheet and said "trace and copy the letters on the page. At the end, write the letters all by yourself." The fading worksheets were not used for scoring data purposes. The fading worksheets were just supplemented for extra practice. Through observation by the researcher, it became clear that the fading worksheets alone would not be motivating enough for the students. As a result, the researcher continued to pair the muscle memory activities which were more reinforcing for the students with the fading worksheets for extra supplementary practice.

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Interobserver Agreement and Fidelity of Implementation of Experimental Conditions

At the end of every session permanent product data were collected for both Participant 1 and 2. Each student was given a marker and a blank white piece of paper with a line for every letter learned previously with the study in addition to a line for the letter that the student is currently working on. The researcher instructs the student to, "write your name and try your best. First write me a (first letter of the student's name), then a (second letter of the student's name), and finally (third letter of the student's name)." The student would then independently write the uppercase letters on the specified line using the given materials. The researcher along with the cooperating teacher would score the student's work independently. After the permanent products have been scored then the data for the number of correct letters written was compared among the two scorers. Interobserver agreement was taken 100% of the time across 19 sessions for both Participant 1 and Participant 2. Interobserver agreement was calculated by dividing the number of agreements by the sum of the agreements and disagreements and multiplying by 100. Agreement between the researcher and instructional assistant for Participant 1 was 74% and for Participant 2 was 84%.

Findings

The number of correct uppercase letters written during baseline and across the muscle memory activities and fading worksheets study implementation were shown in the graphs for each student.

Participant 1

For baseline, Participant 1 scored a zero with a possible score of 14 points total for correct number of letters written in his first name.

During the implementation of the muscle memory activities alone, Participant 1's scores had initially increased and later acquired maintenance for the first letter over four consecutive sessions. He had a mean of 1.8 out of a possible two points for the first letter with a range from 1 to 2. However when the second letter was implemented the data had initially increased, then decreased, later increased, and finally decreased again before the implementation of fading worksheets were put in place. His scores for muscle memory activities alone lasted over 11 sessions. Participant 1 had a mean of 2.6 out of a possible four points for the first two letters with a range from 2 to 4. During session 16, only a muscle memory activity was implemented because the researcher and Participant 1 ran out of time in the allotted schedule in which he scored a four out of a possible six points.

When muscle memory activities and fading worksheets were paired and implemented together, Participant 1's scores resulted in a slight upward and downward trend for the first two letters over three consecutive sessions with fading worksheet one. He initially increased and ultimately

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decreased. Participant 1 had a mean of 3.3 out of a possible four points for the first two letters with a range from 3 to 4. Participant 1's scores with the first three letters over three consecutive sessions with fading worksheet two resulted in a downward and upward trend. He decreased first and then increased. Participant 1 had a mean of 3.0 out of a possible six points for the first three letters with a range from 2 to 4. Collectively over the last seven sessions, six of those utilized both muscle memory activities and fading worksheets paired together.

Participant 2

For baseline, Participant 2 scored a zero out a possible score of 16 points total for correct number of letters written in her name.

Participant 2 made minimal progress throughout the first twelve sessions using muscle memory activities intervention alone for the first letter of her name. There was no progress made from baseline until session six and seven. However, at the start of session eight the data remained stagnant from baseline data. For the first four sessions of the intervention, Participant 2 scored a 0/2. Then during session six and seven, Participant 2 scored a 2/2. However, from session eight to session twelve, Participant 2's score remained consistent at 0/2. For the muscle memory activities intervention alone, Participant 2 had a mean of 0.33 out of a possible two points for the first letter with a range from 0 to 2. A total of twelve sessions were completed using muscle memory activities alone before an additional intervention was utilized.

When the second intervention involving fading worksheets were implemented together, Participant 2's scores started to gradually increase. First tracing worksheets were utilized during session thirteen; Participant 2 continued to score 0/2 with a mean of 0 and no range. Similarly, when fading worksheet one was implemented in session fourteen, Participant 2 scored a 0/2 again with a mean of 0 and no range. For session fifteen, fading worksheet two was implemented and Participant 2's trend increased to ½ with a mean of 1. For fading worksheet three during session sixteen and seventeen, Participant 2's trend continued to increase and scored a 2/2 with a mean of 2 and no range. During session eighteen and nineteen, the second letter of Participant 2's name was implemented and she continued to make progress. Participant 2 score a ¾ for both sessions using fading worksheet four with a mean of 3 and no range. Ultimately, the last seven sessions the intervention consisted of both muscle memory activities and fading worksheets paired together.

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Figure 1. Data collection sheet for Participant 1 used for baseline and intervention.

Handwriting Data Collection Sheet

Name: Gabriel Date: _____ Session: _____ Phase: _____ Data Collector: _____

Letter	Slant	Formation	Total
G			
A			
B			
R			
I			
E			
L			

Figure 2: Data collection sheet for Participant 2 used for baseline and intervention.

Handwriting Data Collection Sheet

Name: Kaedynce Date: _____ Session: _____ Phase: _____ Data Collector: _____

Letter	Slant	Formation	Total
K			
A			
E			
D			
Y			
N			
C			
E			

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Figure 3: The number of correct letters with handwriting for Participant 1 during baseline (session 1) using Muscle Memory & Fading Worksheets (sessions 2-19).

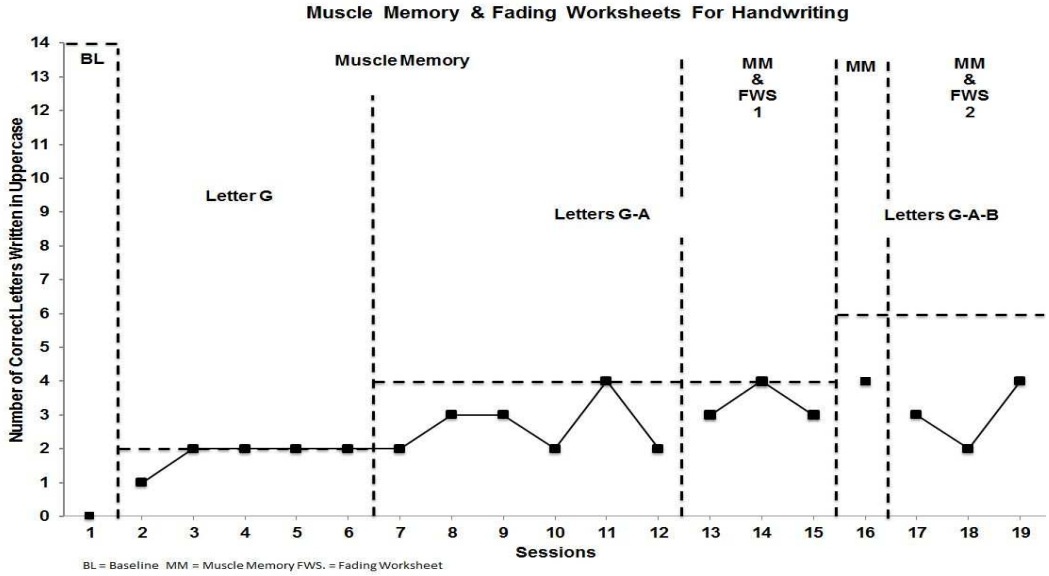
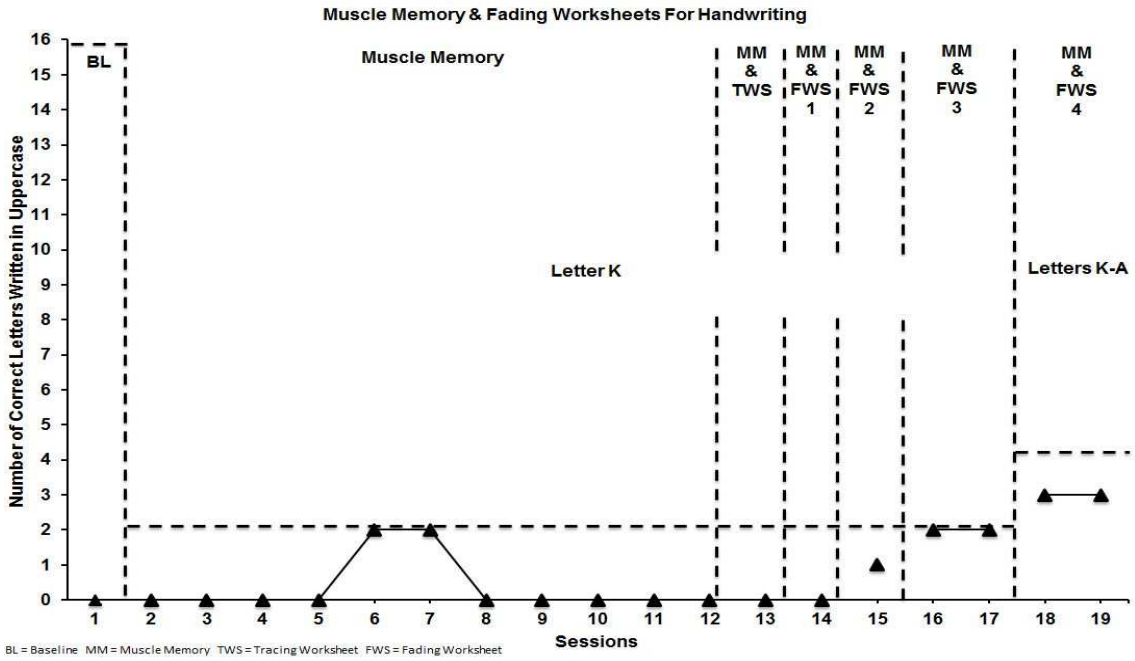


Figure 4: The number of correct letters with handwriting for Participant 2 during baseline (Session 1) using Muscle Memory & Fading Worksheets (sessions 2-19).



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Conclusion

The purpose of the study was to teach Participant 1 and Participant 2's to write the uppercase letters of their first name using muscle memory activities paired with fading worksheets system. Both students made improvements from baseline, however there did not appear to be a direct functional relationship between the numbers of correct uppercase letters written and muscle memory activities paired with fading worksheets. But a number of factors may have attributed to the results of the study.

When the researcher approached the cooperating teacher and occupational therapist for input with a handwriting intervention, the muscle memory activities came highly recommended by both from personal experiences. The first author initially wanted to use a Handwriting without Tears (HWT) Olsen, 1998) curriculum and materials to demonstrate and replicate our earlier work (Carlson, McLaughlin, Derby, & Blecher, 2009; McBride, Pelto, McLaughlin, Barretto, Robison & Mortensen, 2010) suggesting that HWT is very effective to teach legibility and name writing with preschoolers. However the cooperating teacher did not feel the approaches with that curriculum was developmentally appropriate due to the time consuming tasks required. As a result, the muscle memory intervention was implemented not because of the researcher's initial choice but through outside recommendations. In retrospect, the first author would have preferred to do the HWT curriculum for the intervention to provide more built in practice for the students to write the letters of their name using paper and a writing device that could generalize more effectively to their handwriting. We have noted this in our prior research with the cooperating teacher (McBride et al., 2010).

After 11 sessions with the implementation of muscle memory activities, Participant 2 had made minimal progress. The researcher grew concerned early on with Participant 2's lack of progress given the amount of time spent working on one letter, but the cooperating teacher and the occupational therapist told her not to rush the process. They explained that the formation of letters was a tedious process that does not occur in a matter of days. Also, the occupational therapist explained in addition to the time consuming task that accompanies learning a letter, the letter K was among one of the hardest letters to write because of the different directional strokes involved.

In addition to the discrepancies with the time that should be devoted to every letter, there were also discrepancies with the scoring criteria for slant and formation with the intervention. Initially, the researcher was taught to grade slant and formation very rigidly with specific criteria on the exactness of the slant and the neatness for formation. The first author realized halfway through the intervention that with the pre-existing criteria for scoring the letters the students may never attain the goal for any letter despite the fact that the letters are legible. As a result, the researcher set up a meeting with her supervisor to discuss the criteria for scoring. The supervisor told the

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researcher that the criteria was unrealistic and to score the letters again given a new improvised criteria for slant and formation given Participant 1 and Participant 2's age and the population of the students. After multiple sessions with minimal progress made and conversing with the third and fourth authors, the researcher paired the muscle memory activities with an additional intervention to help Participant 2.

Suggestions and Recommendations

The muscle memory activities alone was used at the start of the study, but was later paired with fading worksheets. The muscle memory activities alone proved to be motivating for the students especially for Participant 1. The assortment of materials for the students made learning the letters more interactive. However, the data itself showed that muscle memory activities alone did not prove to be effective due to the lack of a consistent increasing trend. It was hypothesized that the students did not acquire enough practice with the letters prior to the permanent product to master the correct directional strokes from memory. Also, it was hypothesized that although the muscle memory techniques emphasized on the verbal prompts for the correct directional strokes the students were not able to generalize the muscle memory activity to the final permanent product when asked to write out the letters.

For Participant 1, the progress with the additional fading worksheets was not as effective as we had initially thought. Due to Participant 1's small attention, both the implementation of the muscle memory activities with fading worksheets took too much time to complete. Also, he at times was more interested in drawing rather than writing the letters especially on the fading worksheets and on the final products. Or he would intentionally not follow the researcher to get a reaction out of her because he is adult attention maintained. The whole intervention segment for every session required too much time and increased his distractibility and decreased his tolerance for staying on-task.

With regards to Participant 2, several fading worksheets were implemented. The reason behind all the changes was for multiple reasons. First the researcher made fading worksheet one to see if Participant 2 was capable of making the strokes necessary to make the first letter of her name or if she was developmentally unable to do the strokes quite yet. However as the worksheet showed, she was able to do the strokes. The researcher then made fading worksheet two and implemented it with Participant 2. However, the cooperating teacher reviewed it and realized the fading worksheet was not written in sequential steps for a fading out process. As a result, the researcher made a revised fading worksheet with the write sequential steps that resulted in fading worksheet three. After two days of implementation with fading worksheet three, the cooperating teacher realized that Participant 1 did not understand the concept that the letters that he was learning was part of his name. As a result, the cooperating teacher made a new fading worksheet that incorporated the full length of their names for both Participant 1 and 2.

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The various changes in procedures and strategies clearly show the efficacy of employing daily measurement and data based decision-making to improve student academic performance (McLaughlin, B. Williams, R. Williams, Peck, Derby, Bjordahl, & Weber, 1999; Shapiro, 2011). Teaching such a skills to preservice teachers have been advocated by the national and state teacher certification organizations and departments (See B. Williams, McLaughlin, R. Williams, Howard, & Marchand Martella, 1993; McLaughlin et al., 1999). In the present analysis we were able to employ single case research methodology with daily measurement in an attempt to assist preschool students to learn to write their names. It appears that other procedures such as tracing and systematic instruction (Caletti et al., in press; Park et al., 2008) or employing *Handwriting without Tears* materials and procedures (Carlson et al., 2010; LeBrun et al., 2012; McBride et al., 2009; Morris et al., 2012; Thompson, McLaughlin, Derby, & Conley, 2012). This will have to be examined in future research.

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The Practice of Autopoiesis as the Aim of Education

SHOHAILA JAVED

PAKISTAN

Abstract: *This paper invites your travel from the "deep me" of self to other with the knight's hidden inwardness (Kierkegarrd, 1990), to see what takes place in the dynamics of my self-referred living system Maturana calls autopoiesis and then, moving from self-transcendence to "absolute otherness." Here 'I' is in the space between Master signifier 'I' and the significant other, where 'I' is never alone but always transpersonal. This unified existential and experiential space puts their unity together that gives them the potential to educe new meaning to life in a way that conserves what already is, and also prepares them for creative performances in which the contextual significance of education is manifest.*

We are in the truth when we are true to ourselves.

Paul Ricoeur, 1981.

Only through others, says Gadamer (1977), do we gain true knowledge of ourselves.

Prefacing my domains in education: remaining true to myself

I am determined to remain true to myself. Sohaila Javed, 2004.
There is an intriguing quest embodied in this opening statement with three keywords here:
I am: what is its substance and meaning.
Remain: what is the main/ essence/ basic being of myself that is so sufficient
that invites my truth and resolution.
Myself: is myself the finale to the act performed or is there more to it?

These opening words in no way mirror a narcissistic self-image. It is not that self is impervious to perception. Or like Narcissus blind. Rather, it is self's creativeness in her/his story. This self's identity is a metonym of 'ing' that is between no being and not being, and what transpires between two such moments is real living in the space of Autopoiesis. This metonym essentially is a meaningful gift, asking for a reflective and doing subject, who makes sense of it, and knows that real 'me' and/or representative 'me' as subject identity and subject construct is not a formation or a singular rational, autonomous elixir that has intoxicated western education for centuries. There have been other ways of knowing real 'me', inward orientations and directions that already make me *more* than a mere partial subject of rationality and autonomy.

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This is "religious inwardness," or what Kierkegaard calls the truly ethical point of view a "rebirth" (in Dooley, 2001) to actuality. It points to (e)motions and other fine susceptibilities as imagination, intelligence, desire, dreams, will and intentions, and spiritual sense that, without suspect or suspicion, form our internal consciousness, our essence, and are some-things we have and need sense to cultivate, nurture, blossom.

Education that is holistic and humanistic can provide and pique and enhance this es*sence* and sense, and help its progression on nurturing sites so that subjects become fully human and capable of "exercising their individual and intentional agency" (Usher and Edwards, 1994) for individual and collective human development. Ignorance of this fundamental and higher potential, makes or mars us, is an open answer and challenge to who and what I am, and what I do in the educational domain of existence. All educational humanists, I expect will transgress the modern/postmodern boundaries and enter with me, into the warm and moist womb of humanity where we all begin the journey of our human becoming.

Education then, is another collaterally arranged social womb in which identity is forever processed and performed, made sense of, and for all time seen as an explicit purposeful mission. This narrative construct, compounded with love and compassion as essential gifts, not only perceives the meaning of self but also the significance of self. Selfhood, then as I see, is a social construct, a unity with its own organization, autonomous entity that begins as some-thing, and moves always already to some-thing afar. This some-thing is our essence, our spiritual presence, our identity as human that carries an essence of wisdom and goodness that is our authenticity, spent in living with Truth, what to Ricoeur is being-in-truth. This forms the foundation on which this social construct is to grow and blossom. This fundamental notion of the social and essential subject goes beyond the "modernist notion of the autonomous and essential subject that has been under attack for decades, by psychoanalysts such as Michel Foucault, by postcolonial theorists such as Edward Said and Homi Bhabha" (Claudia W. Ruitenberg, June 2001). It cannot grow in isolation for then 'Be yourself' (that is authentic) and 'Be who you want to be' (that is autonomous), that were modern education's prescribed learning outcomes may be a selfhood construct (Butler, in Ruitenberg, 2001), but in essence, are an explicit selfish objective.

My notion of selfhood as construct, which has essence and sense embedded in it and a mission to use it for meaningful and significant humane purposes, is the subject in this paper. Entry, encounters and embraces as such are essential to our being and becoming, and I contend, more particularly with a touch of transcendence and inclusion in education are the necessary potential that could transform representative selves into a contingent production of meaning and significance. The transcending self, as I see it, with all its essential gifts remains as a nothing combine of 'I and not I'. This self, with a "desubjectivized subjectivity" (Ricoeur, 1981) is not an abyss, the chaos of virtual nothingness, annihilating unbecoming feature of self. On the contrary, it is a self- conscious self-cremating depth, where self sees self on the edge, an abyss of

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creative nothingness, opening up in the center of our soul, in full colors of spirit. And 'it' remains always within grasp to be recognized, remembered and lived always as a passionately concentrated human in communication and communion with humans. This being then, becomes the ultimate subject of education and its shepherds. This particular identity is understood to be the one that is connected internally to a specific content that is beyond gender, race, color or creed. Its structural feature defines all identities as sharing a constitutive humanness, the shared and equal condition of all identity-constitution, a veritable creation.

This difference is a shared human predicament and the perspective it opens is the immense difference that particular identity can make when combined with other such identities for performances of our subject positions without that "shaking our foundation" that is our essence, and that can be carried outside "conventional oppressive positions" (bell hooks,) in education. We are born to manifest this essence, but always remembering the underlying continuum of nothingness, of death, which threatens to make life meaningless, but can become our resource to reality. Our human becoming then, is the proposition for education. Postmodernism's exclusive claim for identity, gender and race issues is disregard for thought currents that have flowed continually with concern for 'self and other' in other historical constructs and contents. Both east and west have given themselves up to self-psychology, self-philosophy, self-ethology, pertinent to different world views that emerged at particular times. The reawakening in the west, now is an opportune event for seers from both east and west to *see each other* as a combine from a global perspective.

The self is an indispensable principle of being itself, and its integral, potential presence as "the locus of permanence" remains as self's own integral, potential presence, "the center of power" in self's center, (Shalom, 1984). This self as such has been, and will always be a worthy topic for serious cognizance. Its deep inlays take us to the Source of our formation and development, and bring us up along with it as "successive acts of appropriation," taking hold of us, sustaining us for as long as we grow and transcend in meaningful and coherent ways, that is by more knowing and "change from 'beginning' to 'end' " (Polkinghorne, 1998, in Sullivan, 1999). Only in the last three decades there has been a shift in western psychology back to the subject's consciousness of self. Beginning with Freud's The Ego and the Id, and onto Heinz Hartman, Jacobson, Maslow and Branden, the study of the nature and function of the self-system has now become the locus of attention. Quite interestingly, this charismatic subject has been the ruling passion of eastern and western mystics and saints, and before that, always of the locus of Necessity. It defines their essential belief-system and intellectual pursuits. Misappropriating it as side issue would be injustice to the open and liberating expanses of education. The self is chameleonic, and adopts different roles/ rules as the vehicle of development, growth, and transcendence. Its spiritual growth calls us to look within for insight that may be transformational. This is the base from which the vast task of human solidarity can begin.

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A Unique Sublime Image of Self

A trapeze through Ted Aoki's seamless waltz, penned down for curricular eyes as Narrative and Narration in Curricular Spaces (1996), I came across Zizek's insight (1993): "The image of the rebels waving the national flag with the red star, ----- of national life, there was nothing but a hole in its center. Zizek continues:

> *It is difficult to imagine a more salient index of the 'open' character of a historical situation in its becoming----------of that intermediate phase when the former Master Signifier, although it has already lost the hegemonic power, has not yet been replaced by the new one..*

The enthusiasm of the rebels in that sublime moment situates the open self in another moment, where tarrying with its negative at the center, it may perceive the centrist ethos of all. So welcome to another self tarrying with the negative in the singular moment with all in the center. This no-thing space as the identity of "deep me" (Homi Bhabha, 1994) identifies the pure subjectivity of all identifiers and the "groundless ground of ambiguity that marks the human condition" (Ted Aoki, 1990). Like my simple grounding of nothingness, it is a site of viable novelty for talking nothingness that is vociferous for new vibrant original activity, which carries sense of full engagement and enjoyment.

Borrowing Maturana's term "autopoiesis" (1980) for the autonomous organization of the "self-referential systems," I see self as "a self-referred system…that could only be characterized with reference to itself…is a living system without reference to a context." Agreeing with its self-referentiality, I take it beyond to the larger Context of which it is an integral part, the Self-referred System of the Cosmic Universe that is participant essential of the self, with the self living its diversity within its autonomous entity. That this system exists is an existential proof of the spontaneous way it arises. It lives in self as self lives it, naturally, directly, immediately. Maturana'a autopoietic ambience makes it a context within itself…without notions of purpose, goal, and use or function… an autonomous entity… living naturally as a living system so that whatever takes place in this *space* as living system, takes place as necessarily and constitutively determined in relation *to* itself. Being defined as unity through self-reference is its manner of autonomy and the basic circularity of its components. On this fathomless space of intimate narration, purpose, use, function or goal emerges spontaneously out of it's own organization as its eventual choice, where the united yet autonomous entity builds internets of relationships-webs coextensive, buoyed by its intrinsic, innate ever-living relationship with the Cosmos, that Maturana calls "the conditions in which different chemical processes can be concatenated to form topological unities that constitute relational networks in the auopoietic space" (1980).

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This space has its urgency for the positive but never forgets the way it trapezes the negative – that is pure transparent nothingness- that is "the empty space of narration" between no being and not being. This is the natural condition of each component of the living system. It arises spontaneously and then, under the necessarily and constitutively determined system, the component's chemical processes concatenate to form and live it's unities with the Being and beings, and then die its own constituted life, while passing on its legacy to the ongoing components of the autopoietic system. And while living its own existence, this organism, even while "operative in the phenomenal domain," steps back to see its operations, the object of the description. This combines creation and praxis as these are experienced in the living ex-change program of education, where they operate with self's organizational unity.

Before entering this dynamic site, I invite your encounter with the really real of Maturana's autopoiesis, characteristic of the organization and operation of the living systems in the physical space that appeared as 'Biology of Cognition.' In his search for a complete linguistic description that conveyed the "central feature of the organization of the living, which is autonomy," in response to his first grave concern: what is the organization of the living? It at once invites bare attention to the structure of the organism that permits it to operate adequately in the medium in which it exists. His second concern: what takes place in the phenomenon of perception invites description of the observer as s/he is operative in the phenomenal domain and is the object of the description. Maturana, finding himself in a dilemma whether "to follow the *path of arms* (praxis, action) or the *path of letters* (poiesis, creation, production), and his eventual choice to attempt at poiesis, invented the word he needed: autopoiesis. This word directly explains what happens in the dynamics of the autonomy proper to living systems, and so his choice of the word.

From Maturana's autopoietic space, the basic structure of this organism and its operation in the phenomenal space has the essence of alterity, and creativity and living creatively as a way of being, and compassionate communication as a mode of relation in the domain of doing organisms. We are all knowing and social (participating) beings by virtue of our unity, organization and structure, which it generates in its interactions with other unities. Does it serve my purpose that we interact through the simple interplay of our properties, our "natural sociability," and through a living interconnection what Maturana calls "recurrent interactions," we can initiate in each other a structural change and select in each other a structural change but "without loss of organization." Understanding the "internal dynamics of states as composite unities" and interacting with them "as simple unities" in the environment in which we behold them, and respecting their autopoiesis, their autonomous entity, we can enter the dynamic space of interbeing and interrelationship that characterizes living in the human world, and achieve what Miskawayh (in Zurayk, 1968) calls "anthropine eudemonia" (human happiness).

With autopoietic understanding and its practice of "structural coupling" in "absolute otherness" (Hegel, in Maturana, 1980), we can live a natural social system in our own selected domain/discipline and see our self-referentiality becoming and engaging a powerful metapoiesis

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en route our human referential world. Imagine the social wonder that can get created if the basic stable structure of the human component is realized and lived throughout its cultural relationing that it will, out of necessity of its organization as human component, naturally satisfy as social entity. Such human being in the social domain always happens through the fulfillment of the basic biological preferences (states of positive affirmation that bring love) and rejections (states of negative reprehensibility that breed cynical disregard and hate) that constitute this human's immediate existential domain. These actions, therefore, as natural, spontaneous expressions of preferences or rejections, constitutively affect the lives of other human beings "from having to remain within the world and yet hold fast to a guiding telos that is incommensurable with that of the universal," and have ethical effects. This is also in a way what Maturana suggests and Kierkegarrd sees as a "rebirth" to actuality, with its manifestation in our living contemporaneously with our Cosmic Unity, expressed in the educational domain as a doing philosophy, something that has veritable roots in ancient traditions.

What moves the moved

The simple essential substance of the soul is endowment of another kind and therefore, is the only bestowal of life. Once within the capacity of the body, it becomes the center of power, is self-moved, and has intellectual cognition of itself. Because it is self-generating and therefore, self-existent, it is an integral substance of the human phenomenon. It has no opposite and therefore, does not perish or vanish. Because its essential being is substance, it knows that it essentially is the "locus of permanence" and the "center of power." And this centrality of power is the simple basis of every human's autopoiesis and autopoietic living. Self is what essentially it is. It knows this and therefore, is in charge and responsible of its self-referred system of holistic living. Miskawayh[1] wonders as to those who do not know their essential substance, their own centrality, and perhaps become causal to its unused full potentiality and their darkened existence and much civilizational darkness that they create. Another insight from him is enlightening:

> *He who does not know his soul while it resides in the body has no way of knowing it once it has departed from the body. Everything is concealed from one who does not ponder everything. He who knows not the source of evil cannot be saved from it." To know the soul is to know self and self-power and to what uses this permanent locus can be put to before its voluntary departure and our involuntary death.*

This warrants us to awaken to this noble substance that is within us If we do not, it counts to the "loss of sensibilia, and we are stricken with anxiety over death." And to Miskawayh, "Die voluntarily, for voluntary death is training in abandoning the sensibilia, and the corporeal pleasures, in discarding passions, and in comporting oneself according to the intellect and the intelligibilia" (1968). He then concludes:

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> *This is wisdom derived from ancient revelations and the rest is self-revelatory. So pondering in solitude and devotion, removing our senses from affectations and becoming receptive for that for which we have readied ourselves. And so we may solve different problems, recite poetry, recollect, understand, and so on. If we turn in this way to a star, readying ourselves, we receive the form and influence as the star receives what it is ready to receive from the Creator.*

This is preparation for the performance of tasks that self has chosen for itself and that have the seeds of its rebirth. And the simple basic state, which the human subject enters after being, and before any identity gets constructed (with all metaphysical essentials- intelligence, soul, nous, spirit-immaterial some-Thing), is of nothingness. It is a basic and unique perceptible characteristic of human existence and its uniqueness continues in her/his unknowing it. We know we are a body, but unlike others, a body with consciousness, with intellectual cognition and spiritual realization. This immediately entwines both body and mind in our self and engages metaphysical attention to what happens therein:

> *Privileging, as they are wont to do, seeing (theorin), thinking, consciousness, metaphysicians seek to determine exactly what it is that we are conscious of when we exist consciously. Is it ideas in our own mind? Or is it movements in our body? And how can we be certain that we are conscious of what we think we are conscious of, not merely oneirically imagining the whole thing?*

Thus, Ricoeur (1981) extends his phenomenological gaze in Hermeneutics Of (Inter)Subjectivity to think of the human mind in the arena of consciousness where it lives in experiential domains that are linguistically expressed, "But is the human person, the self, the subject, am I, are you nothing but, nothing more than bundle of conditioned reflexes, a flow of neural impulses, a self-programming computer, a haphazard colony of selfish genes?" This is serious reflection on the consequential human condition of this intense neural activity that pervades human being today, and ironically brings the dehumanizing reduction of the self that it has inadvertently brought to itself. This was this human's preferential choice and in a mood of arrogant preference and arresting the quality of choice, s/he calls it success. With this unconscious reductionist behavior, the human observer still remains in the center of things. This is the physical reality and shall remain so till human is.

A simple question then, arises: what is that we are not conscious of when we exist self-consciously? If we begin to think of this state as *nothingness***,** and feel this no-thing as indeed it is, if substance is taken as the paradigm of being, before any formal identity gets constructed as

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result of consciousness, and then, reflectively experience "consciousness as nothingness" (Ricoeur, 1981), as Sartre, for instance, did, and let that state continually coexist before our becoming, we may "make better sense of the fundamentally human question, which simply will not go away, of what it means to be a subject, a human person." Perhaps, this nothingness is after all not-so-nothing a state as we deem it self-consciously, and we may turn out to be some-thing more than our overt "nothing," some-thing more than "a bundle of conditioned reflexes." Speaking Ricoeur's language, if the "essence" of consciousness is not to be what it is and to be what it is not, does it downplay sense if the "essence" of consciousness remains nothingness as an experiential state throughout existence? If it already is that, as a result of intense neural activity, what else would it be? That is the quest of inward knowing, and as I read Ricoeur, it is the "essence" of metaphysics in terms of Nietzsche's opposites, as he called them, such as appearance-reality, sensible-intelligible, material-immaterial, becoming-being, fact-essence, practice-theory and of course, matter and spirit.

Thinking metaphysically of human becoming in the above perspective, it is realized that we live in the body and select spiritual consciousness along with emotional awareness for our living practice. Using psychoanalyst Roy Schafer's words, the self becomes "an experiential phenomenon, a set of more or less stable and emotionally felt ways of telling oneself about one's being and one's continuity through change" (in Shalom, 1984). So in the act of being nothing, self finds itself and 'deep me' only through this act. And remembrance of this act is causal to transformation that furthers activity from oneself to yourself and innumerable other selves. Self then becomes the act, the site of self's practice, where with the hidden inwardness, self and others as narrative constructs as practitioners coexist in attunement. Their accouplement (Ricoeur) or Maturana' structural coupling, or as Husserl called it, "the mutual confirmation of its communal being" is the vast ex-change program of metapoiesis, from mere being unto becoming is Desire's desire of self-actualization, but also desiring each other's desire as self-desire, and actively creating possibilities by being-in-truth so that we are just who we are, plain human.

This being cannot step out of this coal*escence*, as it the basis of the relational dynamics and structure of the human cosmos. Remoteness from this cosmic will be our ungrounding. In the event of relation, the human presence as embodied being becomes actual as words of deed actualize in the creative work of goodness that follows. In this context, Tusi seeks the recreation of the form which is represented, and says, "in the soul of the disciples that becomes identical to that which is represented in the instructor's soul, and once the disciples know this and through the knowledge of their instructor, a deep primordial trust is formed." Both in silent agreement at their arrival know that "there will be no differentiation and multiplicity between their souls; and once the veil is removed, they reach their instructor," and are united with her/his oneness, knowing their identical arrival and return.

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This is the base from which any kind of instruction can be done. This is the world view of education that can keep us grounded with our word and act, encountering and embracing all others besides self can give us the meaning of life, life's quest and inspire our becoming pursuits. This is nourishment as is breath for creativity. For Buber (1970), all actual life is encounter, and for self, encounter is the matrix of actual life, and it perceives that it is only in the direct, unmediated, intent gazing of the whole being in presence that encounter and relation exist; with actual life being lived with 'you and I' in the warm embrace of a living connection. The substantiating 'and' between 'you and I' forms the relation and reveals the transcending quality of the relation as I transcends I and you transcend you - both transforming while retaining their human individuality and moving toward humanity. So we experience the need to know that transcendence will touch us only through submission. This is a spiritual trial and only thus 'you and I' live in self's 'deep me', thus changing life as it has always moved self toward a spiritual engagement in education with the social constructs of 'you and I.'

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THE EFFECTS OF USING FUNCTIONAL COMMUNICATION TRAINING AND VERBAL IMITATION TO TEACH TWO PRESCHOOL STUDENTS WITH DEVELOPMENTAL DELAYS THE WORD "HELP"

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Abstract: *The purpose of this study was to examine the effects of Functional Communication Training (FCT) and verbal imitation with two preschool students who have been diagnosed with autism or characteristics of autism. The word "help" was the focus for this study. The two different interventions were chosen based on the participants' current levels of communication skills. An ABC single case design was employed to evaluate each intervention. The results of this study revealed very different results for our two participants. The outcomes suggest the need for further research on communication training for preschool students with autism.*

Keywords: *FCT, verbal imitation, communication skills, ABC single case design*

Introduction

Children with autism have very restricted means by which to indicate their needs and desires to others; this is likely to dramatically reduce their effectiveness as communicators when compared to their age peers (Heward, 2012; Landa, 2007). Without the ability to communicate, it can be difficult for individuals to get their desires, wants and needs met on a daily basis. Communication is also essential for success in school and later in life. The course of language and communication development in individuals with autism varies greatly. The results of early studies suggest that up to 50% of individuals with autism fail to develop functional language (Lovaas, 1987; Smith, Mirenda, & Zaidman-Zait, 2007).

One of the primary diagnostic criteria for the diagnosis of autism spectrum disorders (ASD) is the presence of a language delay or impairment (Luyster, Kadlec, Carter, & Tager-Flusberg, 2008). Children with delayed onset of expressive language have more frequent academic problems, more behavioral and psychiatric problems, and an increased frequency of later problems in speech and language (Fischel, Whitehurst, Caulfield, & DeBaryshe, 1989). For the children with delayed onset of expressive language, it is necessary to teach and present an alternate way of communicating those wants, needs, and desires.

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Review of Literature

Many methods of instruction are available in order to increase expressive language and communication. Learning does not happen in the same manner for all students; it can be through visual, physical, and/or auditory means (Heward, 2012; Park, Weber, & McLaughlin, 2007). One effective method of increasing behaviors is through observational learning and then imitation. People can learn many behaviors, thought patterns, and skills vicariously through observing other people (Horner, 2004). Imitation is intimately related to communication learning (Landa, 2007). In addition, it provides a vehicle for communicative reciprocity. For example, an imitation of another's behavior serves to acknowledge their act, confirming attention and responsivity in a reciprocal, meaningfully contingent way (Landa, 2009; B. Williams & R. Williams, 2011).

Another alternative way to communicate is through the use of functional communication training, or FCT. Several studies have demonstrated that functional communication training (FCT) is an effective treatment in reducing severe behaviors while simultaneously shaping an alternative communication response (Armstrong, McLaughlin, Clark, & Neyman, in press; Talkington, McLaughlin, Derby, & Clark, 2012; Mann & Mueller, 2009).

The first purpose of this study was to evaluate the effects of using functional communication training on a preschool student with developmental delays and characteristics of autism. This participant had such limited communication skills and that this form of training was chosen in order to increase her ability to communicate when she needed help instead of pulling adults around or screaming when frustrated. The second purpose of this study was to evaluate the effects of verbal imitation on a preschool student with developmental delays and characteristics of autism. Both participants were being taught the word "help." The interventions, for each participant, were chosen based on the participants' strengths prior to the study, as identified by the classroom teacher.

Methodology

Participants and Setting

The participants in the study were two preschool students who were attending a preschool for children diagnosed with autism or characteristics of autism. Participant 1 was a two-year-old male that had some but very limited verbal skills and also received special services in the areas of speech, motor skills, feeding, cognitive, social/emotional/adaptive skills along with one-on-one intensive therapy. He attended class two times a week and received an additional two home visits a week. Participant 2 was a four-year-old female that had limited overall communication

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skills and received special services in the areas of speech, social/emotional/adaptive, cognitive, and motor skills. She received one-on-one intensive therapy five times a week.

The intervention took place in a preschool classroom at both students' work station. This was in the corner of the room and included a table and rifton chair along with the materials used during their work times. The students faced the researcher, with their backs toward the other children in the classroom to minimize distractions and maintain their attention on the instruction provided. There were between two and four other students in the classroom during each session. The adults in the classroom included the classroom teacher and two educational aides as well as the first author. This classroom has been the setting for several research projects (Armstrong et al., in press; Talkington et al., 2012) to document the ability of teacher education candidates in special education to successfully teach students with disabilities social important behaviors (McLaughlin, B. Williams, R. Williams, Peck, Derby, Bjordahl, & Weber, 1999).

Materials

A variety of materials were used for this study. A clear jar with a lid, preferred toys, a single switch device, picture icon for "help", data collection sheets, pencils, and educational aides to prompt the children were used as part of this study. The preferred toys were already known prior to the study by the lead teacher in the classroom. Both students preferred toys that made noises and flashed lights.

Dependent Variables and Measurement Procedures

The dependent variables for this study were the total number of verbal responses given and the use of the single switch device to communicate the word "help". For Participant 1, the focus was on the verbal imitation of the word "help." A correct response was counted for the complete or partial imitation of the word "help." Then a second intervention was presented, which paired the sign for help with the verbal response. A correct response was counted for the complete or partial physical motion of the sign for "help" as well as the complete or partial verbal imitation of the word "help."

For Participant 2, the sign for help was first presented and then the use of a single switch device was used as a second intervention. A correct response was counted for the complete or partial physical motion of the sign for help. A correct response was counted for the device if the participant physical touched the device independently. Physical prompts by the educational assistants and the classroom teacher were scored as well. Once the participant had mastered the use of the single switch device, then the researcher had the participant hand over the jar after pushing the device. A correct response was marked for this task when the participant lifted the jar off the table and pushed it toward the researcher.

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Experimental Design and Conditions

An ABC single case design across participants (Kazdin, 2011) was employed. For Participant 1, the intervention was to increase verbal imitation through physical prompting and verbally expressing the word "help" as the participant made eye contact. The second intervention for this participant involved physically prompting the sign for "help" while verbally expressing the word "help." The researcher also included a model of the sign for "help" while pairing it with a verbal response. For Participant 2, the initial intervention was the sign for "help" but was then changed to FCT with the use of a single switch device for "help". Once the participant mastered the use of the switch, then the researcher paired that task with handing the jar to the researcher.

Baseline.

Both participants were presented with a variety of preferred toys which were put into a clear jar and closed with a lid. This clear jar was placed in front of the participants with no verbal or physical prompt. Their responses were recorded on the data sheets. Each participant's baseline data were taken over 10 trials.

Verbal imitation.

For Participant 1, verbal imitation was chosen for the intervention. His imitation skills were emerging strong prior to the study. Verbal imitation was then paired with the sign for "help" as the second intervention.

Functional Communication Training

The sign for "help" was introduced as intervention for Participant 2 prior to the device but the participant did not attempt to the use the sign during those sessions. For Participant 1, the single switch device paired with the visual icon for "help" were used because the participant had prior experience with communication devices and limited verbal imitation skills.

Reliability of Measurement for the Dependent and Independent Variables

These data were collected based on observations during each session. Reliability was collected by the lead teacher in the classroom or the educational aide. Physical prompts were also marked on the data collection sheet for Participant 1 as "+" and any verbal imitations were marked as "V." Physical prompts were marked on the data collection sheet as a "+" and any independent responses by Participant 2 were marked as "I". Independent responses were recorded when Participant 2 touched the switch and/or handed the jar to the researcher without any prompting. The number of agreements was divided by the number of agreements and disagreements and

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multiplied by 100. The reliability for interobserver agreement in baseline for Participant 1 was 80%. During intervention, interobserver agreement was collected on five out of 12 sessions, 42%. The mean interobserver agreement during intervention was 82% (range: 60% -100%). The reliability for interobserver agreement for Participant 2 during baseline was 60%. During intervention, interobserver agreement was collected 100% of the sessions. The mean interobserver agreement during intervention was 77% (range: 0% - 100%).

Findings

Baseline

For baseline, both participants had 0% for the word or sign for "help". Participant 1 did use the sign for "more" instead of "help" during baseline. This sign was mastered prior to the start of this study. Both participants showed no sign of clearly communicating that they needed help opening the jar in order to get the toy that was inside during baseline.

Verbal Imitation

The results for Participant 1indicated that he started to imitate after the third session, however, it started to decrease after that session and was not consistent throughout the rest of the study. According to the results, the mean percent of attempts to imitate was 24% per session (range: 0% - 60%). The second intervention which paired the verbal imitation with the sign showed no significant changes in the participant's response. The mean for the attempts to imitate the sign for help was 0% per session.

Functional Communication Training

The results for Participant 2 with the first intervention (sign for help) showed no results, 0% of attempts for all three sessions. There was a steady increasing trend for the second intervention after it was implemented. The mean percent of independent uses of the switch was 77% per session (range: 0% - 100%). The mean percent of attempts at handing over the jar after using the switch was 55% (range: 0% - 100%).

Figure 1. The percent correct for Participant 1 during baseline, verbal imitation, and verbal imitation with a "help" sign. The dots on the graph represent the verbal imitation and the triangles represent the attempts to imitate the "sign for help".

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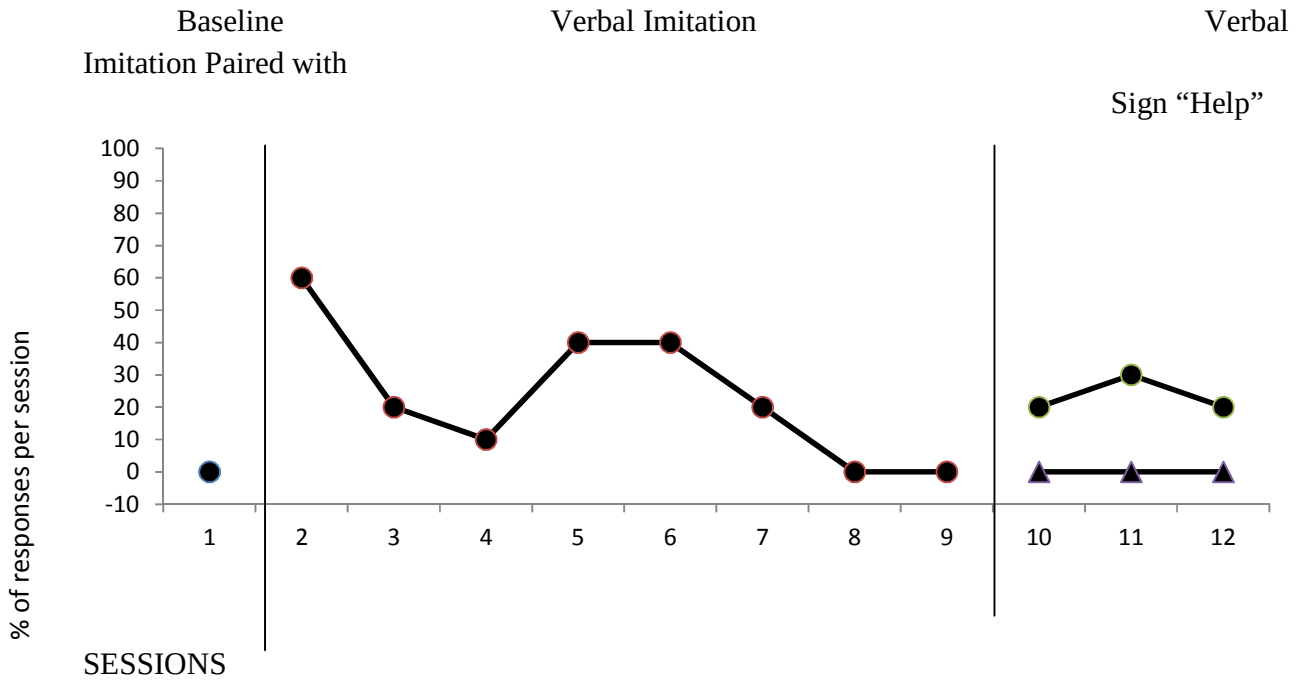
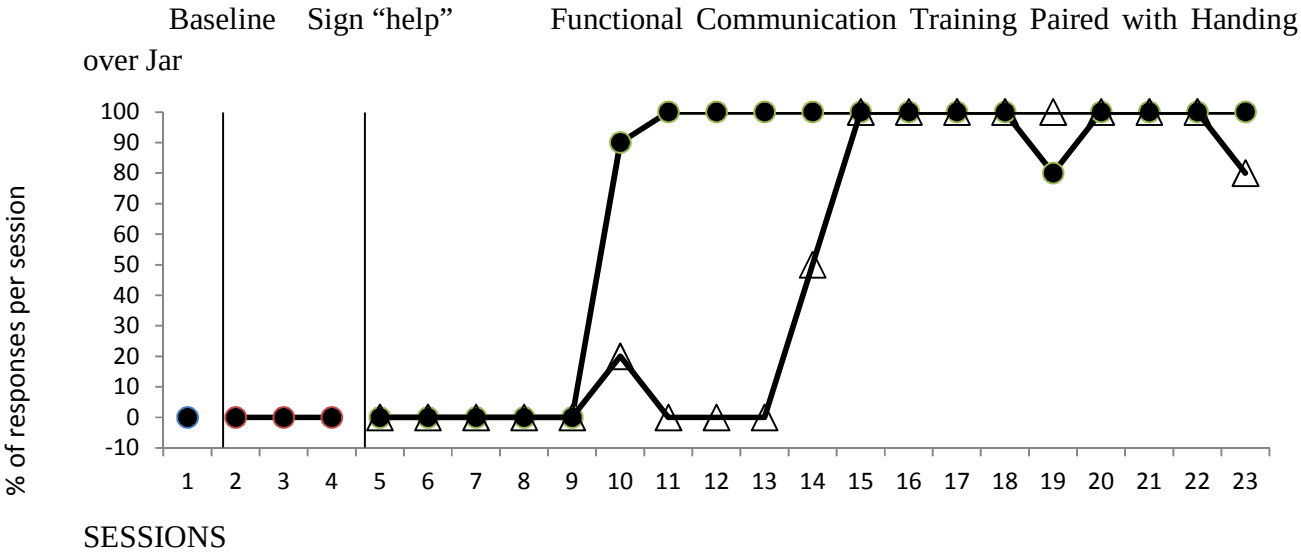


Figure 2. The percent correct for Participant 2 during baseline, verbal imitation, and verbal imitation with a "help" sign. The dots on the graph represent the responses with the sign for help and then the use of Functional Communication Training. The triangles represent the number of times the jar was handed over by the participant after a single switch device was pushed.



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Conclusions

The purpose of this study was to increase the use of the word "help" through imitation and Functional Communication Training. One of the goals of many interventions for children with developmental disabilities is to enhance communication (Meadan, Halle, Ostrosky, & DeStefano, 2008). Many children with developmental disabilities rely on prelinguistic gestures and vocalizations as their primary means of communication well into the toddler and preschool years (Brady, Steeples, & Fleming, 2005). For example, they may request help opening an object by giving it to an adult, they may reject an object by pushing it away when it is offered, and they often point to objects that are of interest to them (Brady et. al., 2005). For Participant 2, the physical action of handing over the jar after pushing the single switch device was taught together in order to help connect the word with the action. The purpose was to provide a functional use of the word after it was heard. The Participant immediately received the toy after the jar was handed to the researcher. After the study, it was suggested to the classroom staff and therapists to continue using the single switch devices in as many situations as possible.

For Participant 1, the intervention did not seem as effective as it did for Participant 2. The imitation skills were strong prior to the study but it was hard to determine if it was the word or the way the need for help was presented that affected the outcome of the results. Despite the results from this study, it was suggested to continue working with the verbal imitation along with the sign for help for Participant 1.

Participant 2 had more sessions because the first author was able to work with her more than Participant 1. Participant 2 attended the preschool everyday whereas Participant 1 was there only two times a week. The researcher was able to have a session or two outside of his normal schedule, but it was very limited. With more opportunities to practice, the results might have been different with Participant 1.

There were some other challenges. The reliability for this study appeared to be quite low. The reason for that after comparing the data sheets was just how the data was collected. The "+" to the researcher was counted as a trial or time that the researcher presented the jar within the session which did not indicate what the participants did in each session. There were two people for reliability throughout the study, which may have been a factor.

Suggestions and Recommendations

Despite the challenges in the study, it provides a strong case for the effectiveness of Functional Communication Training. Participant 2 was able to independently use the switch and then independently hand over the jar by the end of the study. The results were not as strong for verbal

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imitation and the sign for Participant 1; however, it does not rule out that it could be an effective intervention with more practice.

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Evaluation of District Training Educators' Performance in Term of Teachers' Training in Punjab

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Abstract: *The study was conducted to see performance of DTE (District Teacher Educators) in terms of teachers training of primary schools in Punjab. The main objectives of the study were: (i) To review the DTEs' program for teachers' training in Punjab and (ii) To analyze the performance of DTEs' in perspective of teacher training program 100 Primary schools teachers, 100 DTEs and 25 cluster heads were selected randomly from Rawalpindi district. A questionnaire with minor changes was developed and used for the collection of data from the respondents. The questionnaire was primarily structured to keep the research within predefined boundaries. Data collected were analysed in light of objectives of study and it was found that performance of DTEs is satisfactory in respect of teacher training program. Due to its effectiveness it is recommended that the said program should be launched at secondary level also in the province and such program should be launched in other areas of Pakistan.*

Key words: *primary education, primary school teachers, District Teacher Educators, teachers training, professional development*

Introduction

Teaching requires different levels of competence. It is well known that the performance of trained teachers is much better than untrained teachers. Mostly need continuous professional development to meet the challenges of this job. Teachers play a key role in the educational process, and influence the future personal, social and economic lives of pupil. The demands on them are significant and these can be met only by creating a scientifically based profession, which is supported by a body of theoretical and practical knowledge.

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In Punjab (the largest province containing 60% of total populvb ation) Punjab Education Sector Reforms Program' (PESRP) were introduced in 2003, with the primary objective of enhancing access to students; improving the quality; and governance of education. The education reforms focus on increasing enrolments (with net primary enrollments rates of only 45 percent) and retention, especially for girls, and in improving sector governance and monitoring. The program has stressed that the goal of quality education cannot be achieved without improving professional competence, motivation and accountability of teachers (Govt. of Pakistan, 2003).

To achieve these objectives, Directorate of Staff Development, (DSD) Punjab has developed a conceptual framework for Continuous Professional Development (CPD). The CPD framework provides scheme for teacher development in Punjab which can broaden the scope of teacher development from mere "teacher training" to "continuous professional development" for quality learning of students. It combines in-service training of teachers (INSET) with follow-ups, in-class, teacher support, mentoring, monitoring, accountability, incentives, and teacher career growth. These measures were previously not included in the teacher development in Punjab (Government of Punjab, 2012).

Due to importance of teachers training in Punjab by the District Training Educators (DTEs), it was decided to conduct present research. It was expected that this research will provide new dimension for further researchers. It will also enable the higher authorities and policy maker to know the facts regarding the effectiveness of teacher training arranged by DTEs hence they will be able to make future decisions.

REVIEW OF LITERATURE

The Directorate of Staff Development

The Directorate of Staff Development as an apex organization is committed to develop the pedagogical skills and knowledge through a continuous process of professional development of teachers in Punjab. The core objective is to enhance the quality of learning at all levels of education by training and nurturing the teaching cadre both at DSD and simultaneously in the field (Government of Punjab, 2012).

DSD has created support network to provide in-service training, follow-ups, pedagogical support and mentoring to the primary school teachers. Accordingly, each district has been divided into clusters of schools, called Cluster Training and Support Centers (CTSCs) on the base of strength and location of PSTs in the district. DTEs were selected from teaching cadre and were trained to train PSTs in CTSCs (Government of Punjab, 2010).

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Teacher Motivation and Quality Assessment

Drawing a linkage between pre-service and INSET and career development is essential to ensure teacher motivation, which in turn enhances teacher performance and thus impacts learning outcomes positively. Such a link is absent in developing countries (Ministry of Education and Vocational Training, Zanzibar, 2005).

On the issue of TPD assessments, all reviewed developing countries follow mostly quantitative assessment indicators. South Africa is an exception and has undertaken creation of a holistic performance assessment system which tracks progress on qualitative issues (Parker, 2002).

Professional Development

Professional development refers to skills and knowledge attained for both personal development and career advancement. Professional development encompasses all types of facilitated learning opportunities, ranging from college degrees to formal coursework, conferences and informal learning opportunities situated in practice. It has been described as intensive and collaborative, ideally incorporating an evaluative stage (Speck & Knipe 2005). National Professional Development Center on Inclusion (2008) describes that there are a variety of approaches to professional development, including consultation, coaching, practice, lesson study, mentoring, reflective supervision and technical assistance.

Specific continuous professional development linked to the introduction of new educational reforms and organised by the relevant authorities is in general a professional duty for teachers in all countries (Eurydice, 2008; European Commission, 2009). In the OECD (2005) study, it is found that teachers frequently make a financial contribution to the costs of transport, course fees or course materials in recognised professional development programmes. The major exceptions are Chile, Northern Ireland and Sweden where teachers generally do not contribute to such costs.

Guskey (2000) reminds us that many teachers perceive CPD to be irrelevant to their needs and of the fact that we still know relatively little about its impact (p.32). The international literature on teacher CPD (Harland and Kinder, 1997; Joyce and Showers, 1988; Day, 1999; Ingvarson et al., 2003) has drew often discouraging picture. There is ample evidence, for instance, of the failure of attempts to implement change (Fullan, 2001) and of the superficial nature of the gains achieved (Cooley, 1997).

Continuous Professional Development (CPD) has been receiving high priority at in Pakistan for some time (Govt. of Pakistan, 2001; 2007; & 2009) and there is a growing awareness among teachers also for the importance of continuous professional development. There are currently three main providers: education colleges run by provincial and municipal

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educational authorities; tertiary teacher education and other institutions of higher learning; and overseas institutions and organisations.

The programme is based on the premise 'that professional learning is more likely to improve student learning outcomes if it increases teachers' understanding of the content they teach, how students learn that content and how to represent and convey that content in meaningful ways' (Ingvarson et al., 2003).

Responsibility of a District Teacher Educator (DTE)

The responsibility of a District Teacher Educator (DTE) is to promote the quality of student learning by providing on-site and on-going professional support to his/her fellow primary school teachers. The tasks to be performed by a DTE can be divided into three major areas i.e., training, mentoring, and coordination. The present study is concerned with role DTEs in respect of teachers training.

Major Tasks of a DTE

According to DSD Lahore (2006) the DTEs has to perform following tasks as a teacher trainer:

- To assess and identify professional development needs of primary school teachers within the cluster;
- To organize in-service training courses for the teachers as per identified needs within the overall CPD framework;
- To work with the head teachers to plan and organize school-based in-service training (INSET) and other professional development activities.

Specific Responsibilities of a DTE

- To visit and provide professional support to one teacher/mentee per day. A second teacher/mentee may be covered during the same day only under specific instructions of CTSC or DTSC head concerned.

- To plan and conduct Professional Development Day (to be notified by the Education Department in due course) every month on which all PSTs will gather at their respective CTSCs. DTEs will review the activity *of* the whole month and will also help the PSTs to develop lesson plans. PSTs will keep a record of the concepts and ideas learnt on PD days in the PST Log Book provided to them.

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- To participate in training courses and other professional development activities organized by DSD or other institutions designated by DSD.

- To seek professional advice from the CTSC head and/or Teacher Educator (TE) concerned to address any problems or difficulties faced while providing pedagogical support to the teachers.
- To maintain records of professional events and advice given to the individual teacher within the cluster (DSD, 2006).
- To devise a work plan, in consultation with CTSC head, on CTSC Form 1 (Monthly Work Plan) to schedule visits to the primary schools attached to his/her CTSC.

The National Professional Development Center on Inclusion (NPDCI) (2008) reviewed the literature and state that professional development opportunities can range from a single workshop to a semester-long academic course, to services offered by a medley of different professional development providers and varying widely with respect to the philosophy, content, and format of the learning experiences.

In addition, teacher training have positively impact teachers and students' knowledge of a subject matter. The teaching method used to share information by teachers helps children not only stay in school, but also engages young students and encourages them to keep learning (Morton, 1992 and Semiotics Consultants, 1994).

Teacher training in Pakistan is primarily a provincial responsibility. Federal government also plays its role in teacher training through its Curriculum Wing, which is also responsible for teacher education institutions.

One in-service training experiment is the Field-Based Teacher Training Program, which was started in the Northern areas of Pakistan in 1984. This program adopts a new approach in teaching, which shifts the emphasis from the teacher to the student as the center of the teaching-learning process. The most distinctive feature of this program is the practical application of the theoretical concepts that are taught in the classroom of the PTC course.

While these and other initiatives are welcome, it is clear that the quantity and quality of teacher training program in Pakistan must improve in order for the next generation of Pakistanis to be better educated and better citizens than previous ones.

METHODOLOGY

Statement of Problem

The research study was conducted to investigate the performance of district training educators in term of teachers' training of primary school teachers in Punjab

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Objectives

The objectives of the study were:

a. To review the DTEs' program for teachers' training in Punjab.
b. To analyze the performance of DTEs' in perspective of teacher training program.

Methods

Following procedure was adopted to conduct the research:

Population of the Study

- All District Training Educators comprises the population.
- All the primary school teachers working in public primary schools of the Punjab.
- All the cluster heads

Delimitation of the Study

Due to limited time and resources the study was delimited to Rawalpindi district only.

Sampling

100 DTEs, 100 PST and 20 Cluster head were selected using simple random sampling technique. The detail of the sampling is as under.

Table 1: Detail of Sampling

Sr. No.	Tehseel (sub district)	Strength		Percentage
1	Rawalpindi city	Cluster head	5	25%
		DTE	25	
		PST	25	
2	Kallar Syedan	Cluster head	5	25%
		DTE	25	
		PST	25	
3	Kahuta	Cluster head	5	25%
		DTE	25	
		PST	25	
4	Gugar Khan	Cluster head	5	25%
		DTE	25	
		PST	25	

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Tool

Self administered Questionnaire consisting on five point rating scale was applied to collect the data from all the stakeholders with minor difference. Strongly Agree, Agree, Mandatory Agree, Disagree and Strongly Disagree was assigned 5,4,3,2 and 1 score respectively.

Validity and Reliability of Instrument

The questionnaire was validated by panel of expert and reliability was checked by collecting the data from 20 (8 DTEs, 8 PSTs and 4 CH) respondents. Richardson formula was applied for the said purpose.

2. Findings

Table 2: Regular Training under CPDF

Sr. No.	Designation	N	Mean	Standard Deviation
1	Cluster Head	20	4.32	.61
2	DTE	100	4.59	.54
3	PST	100	4.45	.51

Table two indicates the opinions of the respondents regarding the regularity of primary schools teachers training under CPDF program. The means values of all the stakeholders show that teacher training under the said program is found regular.

Table 3: Arrangement of P Day within every three month

Sr. No.	Designation	N	Mean	Standard Deviation
1	Cluster Head	20	4.02	.62
2	DTE	100	4.48	.58
3	PST	100	4.42	.41

Table three is about the opinions of the respondents regarding the arrangement of P Day of primary schools teachers training under CPDF program. The means values of all the stakeholders indicate in favour of the statement. It shows that teacher training under the said program is found regular.

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Table 4: Effectiveness of DTEs Training

Sr. No.	Designation	N	Mean	Standard Deviation
1	Cluster Head	20	4.25	.59
2	DTE	100	4.63	.51
3	PST	100	4.42	.48

Table 4 is about the opinions of the respondents in term of effectiveness of DTEs training given to primary schools teachers. The mean values of all the stakeholders are in favour of the statement. The table also indicates that DTEs opinions are more in favour of themselves than that of others.

Table 5: Beneficial for Teachers in their Profession

Sr. No.	Designation	N	Mean	Standard Deviation
1	Cluster Head	20	4.37	.65
2	DTE	100	4.54	.57
3	PST	100	4.53	.56

Table 5 is to explain the opinions of the respondents regarding the improvement of professionalism of teachers under the DTEs training. The mean values of all the stakeholders indicate in favour of the statement. It indicates that teacher training under the said program is found effective in respect of improvement of teachers' professionalism.

Table 6: Practice of Activity Base Teaching

Sr. No.	Designation	N	Mean	Standard Deviation
1	Cluster Head	20	4.42	.54
2	DTE	100	4.49	.64
3	PST	100	4.41	.61

Table 6 narrates the opinions of the respondents about the practice of activity base teaching of teachers under the DTEs training. The mean values of all the stakeholders show that teacher training under the said program is found effective in respect of activity base teaching.

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Conclusions and Discussion

a) On the base of findings it is concluded that DTEs are performing well in respect of training the primary school teachers. All the aspects of their duties are found regular and effective. It may due to proper training of DTEs by the DSD or due to high professionalism of DTEs.

b) The CPD programme looks at the importance of professional development of teachers as part of a philosophy of life-long learning and in ensuring that teachers meet the expectations with regard to up-to-date and relevant knowledge and skills. The focus of this aspect is on the personal responsibility of individual teacher to ensure that they are competent to provide teaching services and to give relevant and high quality education to students.

c) From the aspect of a national or provincial association, DTE is intended to be helpful to associations in planning and implementing their CPD programme and ensuring that their trainee are competent and up-to-date after training.

d) The responsibilities of Punjab government and education department are to make CPD available and how participation in CPD activities should be monitored.

e) The strategy looks at the role that the DTE might play in encouraging member associations to introduce CPD requirements and in ensuring adequate provision of CPD opportunities, in particular through the Education Committee.

Recommendations

1. The training program of DTEs to train primary school teachers is very effective hence it should be continued.
2. It is found some primary school teachers were not given training due to any reason. It is recommended to improve the program so that every teachers' teaching at primary level must be trained by DTEs. For the said purpose, more DTEs may be appointed and more cluster schools may be declared.
3. There is ambiguity in the service structure of DTEs. Hence it is recommended to develop a clear service structure of DTEs so that DTEs can be promoted to the next scale on the base of performance.
4. As programe of teacher training is found effective hence it is recommended to launch such program at middle and secondary school teachers.
5. This program is in practice in Punjab only, it is recommended to develop such programs of in-service teacher training in other areas/provinces.

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6. For further researchers, it is suggested to replicate the research by adopting qualitative paradigm(direct observance, interview and documentary evidence) and quantitative paradigm(different sampling from backward districts, using some other statistical tools).

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Analysis of Data Mining Concepts in Higher Education with Needs to Najran University

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Abstract: *One of the biggest defy that higher education faces today is predicting the paths of current and alumni students, the purpose of this research is to focus the benefits of the current and alumni students of higher education, Najran University, through Data Mining concepts. In the present scenario textual information is being augmented by ever increasing amounts of non textual information such as images, audio, video. Thus mining of this non textual information plays a great role in its retrieval. Data mining is a process of extracting previously unknown knowledge and detecting interesting patterns from a massive set of data. In the following research approach a functional architecture of user customized audio information on demand system which is termed as Personal Audio Cast (PAC) is proposed, and some of the data mining techniques that might help the staff and the students to achieve the goal.*

Keywords: *Data Mining, Audio and Video Mining Techniques, Education, Najran University, Predictive Mining.*

Introduction

Educational data mining is emerging as a research area with a suite of computational and psychological methods and research approaches for understanding how students learn. New computer-supported interactive learning methods and tools—intelligent tutoring systems, simulations, games—have opened up opportunities to collect and analyze student data, to discover patterns and trends in those data, and to make new discoveries and test hypotheses about how students learn. Data collected from online learning systems can be aggregated over large numbers of students and can contain many variables that data mining algorithms can explore for model building. [8]

Many efforts have been established to help educators realize the benefits of technology and ways of implementing them in the classroom. Many different types of technology can be used to support and enhance learning. Some examples of technologies used in the education system are video content and digital movie making, laptops, computers, and handheld technologies. [1]

Many students are growing up in a digital age where they have constant exposure to a variety of media that is impacting on the way they interact and use information. [1], [2].

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- Audio Mining:

  The Web, Databases, and other digitized information storehouses contain a growing volume of audio content. Sources include newscasts, sporting events, telephone conversations, recording of meetings webcasts, documentary archives such as the visual history foundation's interviews with Holocaust survivors (http://www.vhf.org) and media file in libraries. Users want to make the most of this material by searching and indexing the digitized audio content.

  Salient features of audio mining:

  Audio mining software uses two basic methods, both consisting of indexing and searching phases. Large Vocabulary Continuous Speech Recognition (LVCSR) analyzes word or phrases to generate an index; phonetic audio mining analyzes sound patterns to generate an index and stores the phonetic content of the speech, rather than information about words. The audio mining software makes a rough transcript of the important words in the file (the index) and then searchers one or more index files for all matches to specified searched terms.

- Video Mining:

  Due to MPEG-4 and MPEG-7 standards, there is a further overlap in research for computer vision, computer graphics, image processing and databases. In a typical model-based coding for MPEG-4, video is first analyzed to estimate local and global motion then the video synthesized using the estimated parameters. Based on the difference between the real video and synthesized video, the model parameters are updated and finally coded for transmission. This is essentially analysis followed by synthesis, followed by model update and followed by coding.

  Salient features of video mining:

Modern computer technology, together with the proliferation of broadcast channels and of video- based surveillance systems, has enabled us to produce vast amounts of both raw and processed video data. The potential uses of this data are many and varied.

Monitoring and mining of the content of this already huge, rapidly growing mass of data calls for the development of major computational resources and the development sophisticated video understanding techniques.

Review of Literature

Data mining is a powerful tool for academic intervention. Through data mining, a university could, for example, predict with 85 percent accuracy which students will or will not graduate.

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The university could use this information to concentrate academic assistance on those students most at risk.

Data mining enables organizations to use their current reporting capabilities to uncover and understand hidden patterns in vast databases. These patterns are then built into data mining models and used to predict individual behavior with high accuracy. As a result of this insight, institutions are able to allocate resources and staff more effectively. Data mining may, for example, give an institution the information necessary to take action before a student drops out, or to efficiently allocate resources with an accurate estimate of how many students will take a particular course. [4]

Data mining combines machine learning, statistics and visualization techniques to discover and extract
knowledge. for universities, the knowledge discovered by data mining techniques would provide a personalized education that satisfies the demands of students and employers. data mining techniques can be applied to provide further knowledge beyond the data explicitly stored. Compared to traditional analytical studies, data mining is forward looking and is oriented to individual students. [5]

Framework of Audio and Video Sequences

Methodology

The functional architecture of a user customized audio information on demand system which is termed as Personal Audio Cast (PAC). A user request is processed by the user interface and dispatched to the PAC selector. The selector then constructs a script for a user personalized audio package, employing the database and a profile for the user. Selections from the PAC database are assembled and packaged for the user as a continuous audio presentation. The selector then passes the script to the PAC scheduler which dispatches and delivers the package to the user. for example, several hours of broadcast lecture audio are stored in PAC database along with descriptions of audio (metadata). Let us assume a hypothetical student who is only interested in Windows and Linux Platform. These interests are included in the profile for that particular student. Now, suppose this student sends a request by specifying “Lecture on Operating system platforms”. The user interface handles this request and sends it to the PAC selector. Consulting the student profile, the PAC selector generates database quires related to Windows and Linux platforms, and submits these to the database. Relevant audio lecture items are identified and the scheduler starts to play them. Thus, by employing a student profile unwanted lectures items are automatically filtered out.

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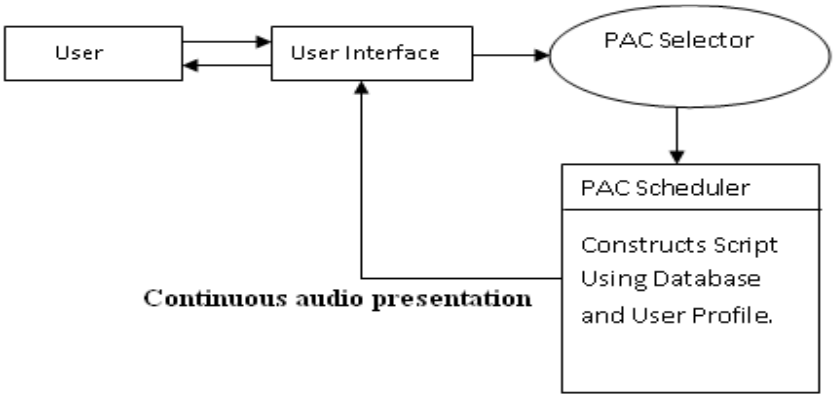


Figure 1: PAC Architecture

From the above framework for the PAC system, key research and engineering problems/tasks can be identified that must be addressed:

- Segmentation
- Metadata Acquisition
- Selection
- Scheduling
- User Profile Generation

Work Area

First, different customization techniques to achieve personalization are discussed. Second, different efforts for metadata acquisition are presented. Finally, key information modeling techniques for the selection of multimedia information are presented.

For metadata acquisition it is necessary to specify the content of media objects. Therefore, to ensure appropriate selection and presentation of audio information, it is to capture its semantic description. By using word spotting for selected content extraction speech recognition looks for a set of pre defined key words in audio where these keywords should covey semantic descriptions. These keywords are from ontology.

Although audio, is used the related work in the video domain which is closest to and which compliments our approach in the context of data modeling for the facilitation of information request.

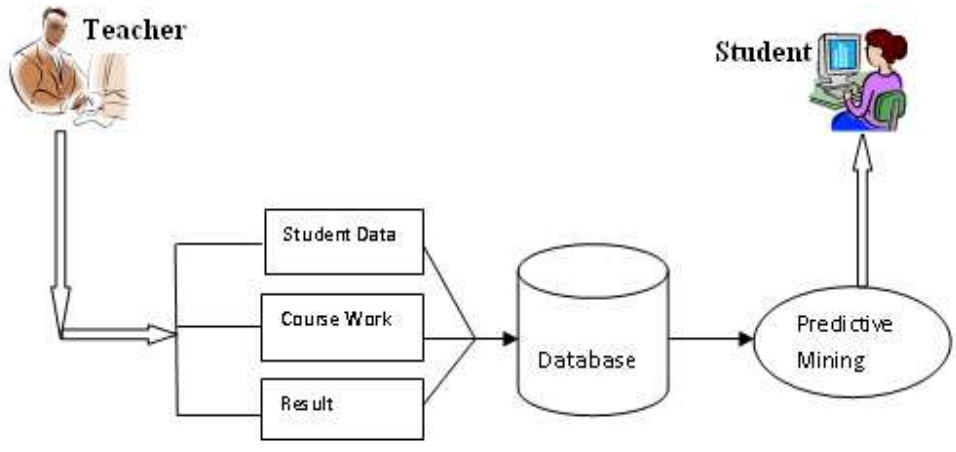
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Data Mining Techniques:

- ***Student Personalization Data***

Data mining (DM) is a series of data analysis techniques applied to extract hidden knowledge from server log data Roiger & Geatz, 2003) by performing two major tasks: pattern discovery and predictive modeling (Panov, Soldatova, & Dzeroski, 2009). Pattern discovery involves extracting unknown interesting patterns. For example, online instructors can utilize pattern discovery techniques to classify students based on their shared learning preferences, to identify outlier students, and to depict the frequent navigational paths in the course. Predictive modeling involves analyzing current or historical facts to make predictions about future events. For example, online instructors can utilize predictive modeling techniques to identify key predictors of students' academic performance and then interventions can be developed for performance improvement.[7]

- Are the students ready to proceed to the next topic?
- When a student is sinking behind in session?
- When is a student at hazard for not completing a course?
- What score is a student likely to get without involvement?
- Which is the best following path for a given student?
- Must a student be referred to a predictor for help?



Students Personalization Technique

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- ***Student Metadata Acquisition***

Data that serves to provide context or additional information about other data. It may also describe the conditions under which the data stored in a database was acquired, its accuracy, date, time, method of compilation and processing, etc.

Effective management of metadata facilitates efficient storing and retrieval of audio, video and textual information.

Most of the educational metadata schemas have been projected over time in order to better distinguish learning objects.

Metadata can be organized into several levels ranging from a simple listing of basic information about available data to detailed documentation about an individual data set or even individual features in a dataset [9]

First, simply store the most general concept. But there are relevant objects for queries to specific concepts. Second, the most specific concept can be stored in the database. In this case, in order to support queries related to the most general concepts associated with this object are stored, thus facilitating efficient retrieval.

- ***Alumni Services***

✓ Alumni Services: Help them further to progress their education with much ease and flexibility.

✓ Consultancy Service: To help students identify both their educational and career goals in life.

✓ Career Service: Helps students in landing their desired jobs. Match the talent of the students with the requirement of job market.

✓ Predictive Data Mining for the alumni students.

- ***Key Information Modeling: Multimedia Information***

Data mining is a powerful new technology with great potential in information system. It can be best defined as the automated process of extracting useful knowledge and information including, patterns, associations, changes, trends, anomalies and significant structures from large or complex data sets that are unknown (Han and Kamber, 2001; Two Crows Corporation, 1999; Chen *et al.*, 1996) [10]

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In this research the various new proposed techniques can be used to implement for key information modeling, such as, Database Query Techniques, Mathematical Model techniques, Web based Techniques. Textual Information Techniques, Program Based Techniques.

Conclusion

In this paper we discussed about data mining concepts and technologies in education which are useful for the current and the alumni students. Some of the main aspects discussed are audio, video sequences, PAC, predictive concept and questions, student metadata acquisitions and key modeling features.

In Higher Education, the Universities will gain more benefit, outline and links to reach a conclusion for current, alumni student performance and activities.

The skill to expose unknown pattern in databases, community colleges and universities can build replica that predict the performance by mining.

Our upcoming research include applying data mining techniques on an stretched data set with more unique feature to get better results.

This research will truly be helpful for all aspects in higher education, and especially in Najran University current and alumni students.

Acknowledgement

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THE NON EFFECTS OF THE SOCIAL COMPETENCE INTERVENTION "WHY TRY" AND CONSEQUENCES WITH A STUDENT SEVERE BEHAVIOR DISORDERS AND HIGH FUNCTIONING AUTISM: A CASE REPORT

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Abstract: *(The purpose of this study was to implement a research-based social skills curriculum called WhyTry to decrease improper verbalizations made by an elementary student with high-functioning Autism. Other classroom interventions set up in conjunction with the social skills curriculum are contingent rewards in the form of chance tickets and the loss of privileges when the student refused to do his work. The effectiveness of the intervention was examined in an ABAB reversal design. Despite frequent academic success, students with high-functioning Autism tend to show deficits in social abilities such as an inability to interact with peers and an inability to monitor social cues. The WhyTry curriculum teaches social and emotional principles to youth in a way that empowers them to take control of their own behavior and choices. The part of the WhyTry curriculum used in this study is called the Word Board, which emphasis the use of thinking before acting or speaking. The results of this study indicate that the Word Board was effective in managing improper verbalizations in some aspects of the school environment, however further research is needed to determine the ability of the student to generalize his inappropriate behavior and interactions with peers.*

Key Words: *ABAC reversal design, WhyTry Curriculum, Word Board, inappropriate verbalizations, high-functioning autism, positive procedures, response cost, recess*

Introduction

Social competence is defined as a multi-faceted skill consisting of social, emotional, cognitive, and behavioral components that are needed for successful social adaptations (Severson & Walker, 2002). Social competency also reflects the ability to take another's perspective concerning a situation, learning from past experiences, and applying that learning to the changes in social interactions (Alberto & Troutman, 2012). Social competence is the foundation upon which expectations for future interaction with others is built. Students with high-functioning autism tend to have difficulty self-regulating their behavior, primarily pertaining to verbalizations with peers and in social environments such as the classroom (Heward, 2013). Students with high-functioning autism typically have the academic skills to mainstream into a regular education environment; however, their behavior and poor social skills can prevent them

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from joining the regular education classroom. General education teachers do not want students in the class that constantly disrupt the instructional flow with continuous talk outs; therefore, appropriate social skills are imperative for students to learn, especially students with severe behavior disorders.

The use and removal of positive consequences have been employed with students to decrease their number of verbalizations (Champagne, Ike, McLaughlin, & Williams, 1990; Dietz & Repp, 1973, 1974, 1984). These consequences have ranged from teacher attention for the student engaging in an incompatible behavior as study (Thomas, Becker, & Armstrong, 1968) or reducing the number of inappropriate verbalizations required to earn a classroom reward (Dietz & Repp, 19731974, 1984; Ike et al., 1990). Finally, these positive procedures (Cooper, Heron, & Heward, 2007) have been widely employed in both elementary (Thomas et al., 1968) or secondary school classrooms (Ike et al., 1990). Montgomery, McLaughlin, and Griffin (2008) worked with a class of students with severe behavior disorders that included inappropriate talk-outs. Their goal was to reduce the number of talk outs made by the entire class. They implemented a group contingency system where if the class responded with two or less talk outs in a 55-minute class period, the whole class could earn an edible reward at the end of the period. The intervention was successful because it effectively reduced the number of inappropriate talk outs for the entire self-contained classroom and it was viewed positively by the students. More recently, Thompson, McLaughlin, and Derby (2011) implemented a reinforcement procedure with an elementary student with autism using a token system. They reduced the frequency of her inappropriate verbalizations across three different classroom configurations using differential reinforcement of lower rates of talking out or inappropriate verbalizations. The student and staff were pleased with the outcomes of the system and continue to implement the procedure in the classroom.

Review of Literature

Students with behavior disorders, such as autism, learn appropriate social skills when they are challenged to take responsibility for their own actions (Cooper, Heron, & Heward, 2007). If adults are always telling students what to do, they will not learn how to regulate their own behavior. A recent new social skills training (SST) curriculum called Why Try claims to teach students how to take responsibility for what they do and think about the consequences of their words and actions. The Why Try curriculum used in this study was developed to empower students to do the following: prevent bullying, improve decision making, prevent drop-outs, change behavior, improve academics, and prevent drug and alcohol use. The curriculum was created by Christian Moore. This program also makes use of the multiple intelligences literature (A) His program teaches key social and emotional skills that open the door to hope and empowerment for students who lack motivation. According to its website (www.whytry.com/), WhyTry is now used in thousands of schools, correctional facilities, and mental health agencies in the United States, Canada, and Australia and continues to be one of the fastest growing

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intervention programs for at risk youth. The "Word Board" is one facet of the WhyTr*y* curriculum that teaches students how to stop and think about the consequences of their actions and words. The "Word Board" also gives students the opportunity to take responsibility for their behavior choices. This aspect of the curriculum was chosen for the study because the student makes improper verbalizations and does not think about the consequences of his non-stop word choices. The Word Board provides the student an engaging, visual way to stop and think about his verbalizations and the consequences they might have on others.

This SST program employs multiple intelligences to motivate and create positive change that assists students achieve opportunity, freedom, and self-respect (Wymore, 2007). Over 10 visual analogies taught that are enriched by music, videos, journals, and team building games. Why Try uses a hands-on curriculum, which helps students overcome their issues and challenges. The program is said to reduce truancy, decrease problem behavior, and improve their academics. Baker (2008) reported that youth had significant increases in their perceived self-efficacy after completing the Why Try program. Eggett (2003) found that students were less likely to have attendance problems, have a less negative attitudes toward school and teachers, and took more responsibility for their own behavior and outcomes. There are testimonials at its website (http:www.whytry.org) but only a small amount of empirical evidence to support this SST program. At this writing there has been three dissertations regarding the use of WhyTry and two articles in the peer reviewed literature assessing WhyTry.

The purpose of this study was to evaluate the effects of the WhyTry elementary social skills curriculum to reduce the number of inappropriate verbalizations of a 4th grade autistic student with sever behavior problems in a self-contained behavior intervention classroom. At this time no data-based evaluations of WhyTry. Therefore, we wanted to provide a case report evaluating the WhyTry curriculum on the inappropriate verbalization for s single student with severe behavior disorders. Employing a structured case report using an ABAB reversal design should provide some initial evidence regarding the effectiveness of WhyTry or any classroom intervention procedure (Kazdin, 2010).

Methodology

Participant and Setting

The participant in this study was a fourth grade male student who attended an urban public elementary school in the Pacific Northwest. The student qualifies for his Individualized Education Program for autism. He also was diagnosed with ADHD and Reactive Attachment Disorder (RAD) by a clinical psychologist and a local psychiatrist. The student received free/reduced breakfast and lunch, and he is permitted to takes home food every week to eat over the weekend. The student has reported that there is no water or electricity at his house. Child

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Protective Services have clearly indicated that his mother regularly takes methamphetamines and marijuana. The student's behavior gets worse when his home life becomes more unstable. His primary behavior is improper verbalizations because this behavior disrupts the classroom and prevents the learning of all students in the classroom. The student talks out all of the time throughout the day. When he is angry or frustrated, his talk outs will be yelling and arguing; however, most of the time, the student simply walks around the room talking when he is supposed to be working quietly.

The setting for the research is a self-contained Behavior Intervention classroom located in a large urban school district in the Pacific Northwest. The classroom serves kindergarten through 6th grade students with emotional and behavior disorders. There are about17 students in the room during the day, however, some mainstream out into regular education during the day. The classroom has two certified teachers, three instructional assistants, and one itinerate instructional assistant whose job is to take data on a particular student not related to the study. The researcher took data on the student's improper verbalizations over a one hour time period without the student's knowledge. This classroom has been involved in prior university and school district classroom research projects (Darrow, McLaughlin, Derby, & Johnson, 2012). The first author took data during literacy groups when the classroom was broken up into groups based on instructional level and all of the students were reading and writing. The researcher worked with the student one-on-one and took data on the transition into literacy, and during the literacy time in the morning. The study was conducted by the first author who was student teaching and completing a course as part of the certification and graduation requirements for a degree in special education (McLaughlin, B. Williams, R. Williams, Peck, Derby, Bjordahl, & Weber, 1999).

Materials

The researcher used a data recording sheet and pencil to record the number of talk outs. The student used the "Word Board" that comes in the WhyTry curriculum and green and red dry erase markers.

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Figure 2: An example of the *Word Board* that was used in the intervention. The board the student used was laminated so that he could write on it with markers and it could be reused.

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Dependent Variable

The dependent variable was the number of improper verbalizations. An improper verbalization was defined as any verbalization during classwork that was out of turn, without being called upon, or disruptive in nature to the rest of the class or teachers. Along with this, any yelling, shouting, swearing, or repeated use of a teacher or teacher's aide's name were considered as improper verbalizations. The participants were aware of the definitions of improper verbalizations throughout the course of the study.

Data Collection and Inter-Observer Agreement

Inter-observer agreement was taken on 50% of the sessions. During these sessions, the teacher's aide would take data independently, marking improper verbalizations on her own note card at her desk. Agreement was scored if the same number of verbalizations were marked. Any differences in the number of verbalizations within a session were considered disagreements. The number of agreements divided by agreements plus disagreements and multiplied by 100 to get the agreement percentage calculated agreement. The mean agreement score obtained was 92% with a range of 63 to 100%).

Experimental Design and Conditions

An ABAC reversal design (Barlow, Nock, & Hersen, 2008; Kazdin, 2011) was employed in this study. For Baseline, the number of talk outs was recorded made by the student in a one-hour time period. For intervention, the student practiced pro-social behavior using techniques employed by the *WhyTry* curriculum, he was rewarded for positive behavior choices, and he lost his privilege of going to lunch and recess when he refused to do his work during the last condition.

Baseline. Baseline data were taken twice and these outcomes were gathered by the first author without the participant's knowledge. The participant was observed, and any improper verbalization was marked with a tally mark. No specific attention was given for improper verbalizations. A return baseline when the researcher took away the *Talk Board* and dry erase markers from the participant and did not give him any prompts or redirects to think before he spoke or to work quietly. The second baseline was in effect for two sessions.

WhyTry social skills intervention + chance tickets. The *WhyTry* curriculum was used in conjunction with contingent praise and rewards to intervene on the student's behavior. The WhyTry program aims to teach students decision making strategies, ways to deal with peer pressure, and how to act respectfully and honestly. The program empowers students to take responsibility for their actions and teaches students why it is important to make the better, more difficult choices for positive behavior. The part of the program used in the study is called the "Word Board." The researcher gave the student the board along with green and red dry erase markers. The researcher discussed with the student how his words have consequences (for example: saying "I will blow up this school" will have consequences) and emphasized the

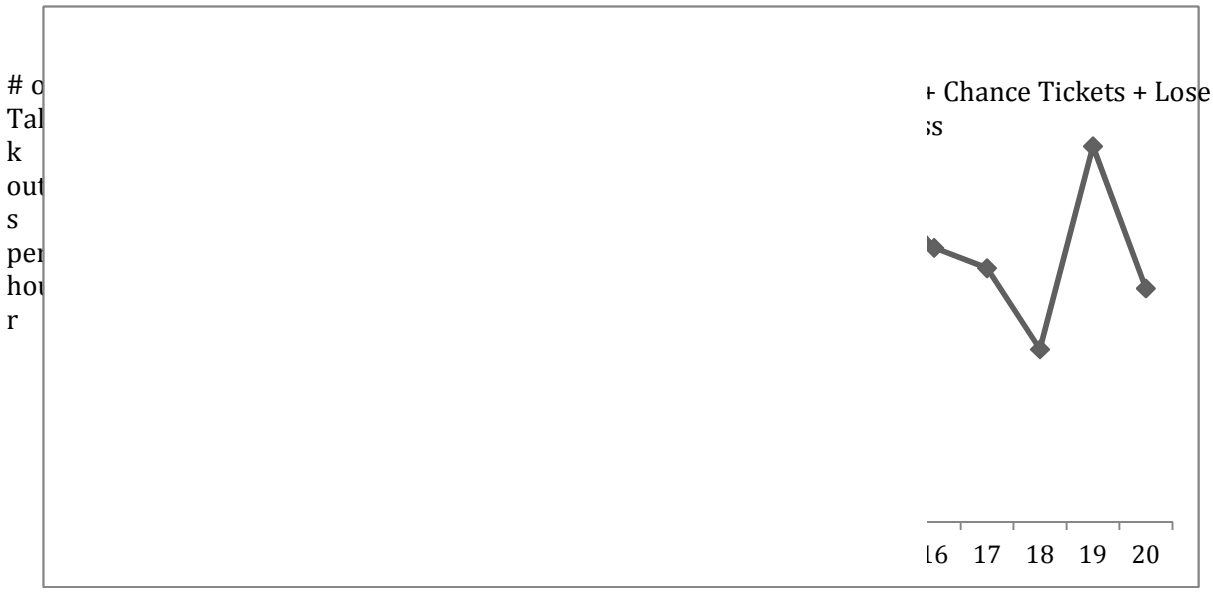
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importance of thinking before speaking. The first author told the student that when he feels like talking, he should instead write his thoughts on the "Word Board" and then decide if they are appropriate. The student was given green markers to write neutral thoughts that he has, and red markers to write angry thoughts.

In the classroom, students earn chance tickets for making good choices throughout the day. These tickets are put in a jar and were drawn out so the student would earn positive rewards. The student received chance tickets for working quietly and making the choice not to talk out in class. The first author continued to take data on the student's number of talk outs during the one-hour time period. Mastery was defined as two talk outs or less in one-hour. The student was prompted to use his "Word Board" and raise his hand if he wanted to speak, as well as rewarded for positive behavior and quiet, independent work.

WhyTry intervention.+ chance tickets+ lose recess + lose lunch and recess. Because the student was talking out to escape writing assignments, he was told that he would not be allowed to go to recess and he would eat lunch in the classroom if he continued to talk out and refuse to work. When the student talked out and refused to do his work all morning, an instructional assistant would go get his lunch for him and bring it back to the classroom for the student to eat. After eating his lunch, the student would stay in from recess and finish the writing that he was assigned from the morning literacy group.

Findings



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Figure 1. Graph of the number of inappropriate verbalizations made by the student in one hour during the two baselines as well as the WhyTry procedures.

The amount of talk outs per hour is shown in Figure 1. Our participant averaged 32 talk outs per hour (range 27 to 38 talk outs) during baseline. His average number of talk outs decreased to 22 talk outs (range during the *WhyTry* word board+ chance ticket intervention. During the return baseline, his talk outs increased slightly (*M* = 32 talk outs). During the last word board+ chance tickets+ lose lunch and recess intervention he averaged 28 talk outs per hour.

Conclusion

The *Why Try* curriculum (Moore, 2008), contingent rewards, and loss of privileges of lunch and recess was not effective for the student because there are home environment issues that deeply affect the student's behavior. The student has been in and out of foster care, been sexually abused, and is currently neglected and without running water or electricity through the winter. His home life is so unstable and detrimental to his well-being that he needs care and counseling beyond school district curriculums. If the research had been continued throughout the year, the student might have shown more progress; however he was removed from the home by Child Protective Services half way through the study.

Suggestions and Recommendations

The intervention and its various components were viewed as a way to increase a socially important pro-social behavior and as a manner to teaching a student taking responsibility for one's actions are necessary life skills. If the first author had had more time with the student, a more effective intervention might have been found to work with our student. Taking away lunch and recess privileges did not work at all for the student, and if the study was done again, the researcher would have used a more positive intervention, such as earning points in order to earn a new book (something the student enjoys).

It should be noted that the student enjoyed writing on the "Word Board" for a few days, but he lost interest quickly and would not remember to use it. The student liked earning chance tickets; however they were not reinforcing enough to change his behavior. As stated earlier, the student's home environment was too influential on the student's behavior that school activities and district curriculums were not going to make an impact in just a few months. For future behavior interventions to work for this student, we recommend mental health counseling and a stable, consistent, supportive home environment.

Unfortunately, we were able to change our participant's targeted social deficit talking out in class. There were several different issues related to this student that were out of the control of the classroom staff. The lack of a clear functional relationship puts the WhyTry curriculum as a

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classroom social skills training program at some risk. Even with the evidence from unpublished doctoral dissertations (Baker, 2008; Wilhite, 2010) and a report in the peer reviewed literature (Alvarez & Anderson-Ketchmark, 2009), clearly more research and evidence is needed before WhyTry is recommended. The program is quite expensive for a school or classroom (just under $2000.00), so clearly more evidence is needed to recommend this program. Clearly research with small groups as well as individuals is needed. This should occur before a school system spends a great deal of money on this social skills training program. As Bullis, Walker, and Sprague (2001) have lamented, the evidence of effectiveness remains illusive. However, in fairness to the Why Try program, we were unsuccessful with a very difficult student and clearly more research is suggested with Why Try with and without consequences. .

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