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Using Cultural Contextual Story-Based Lessons to Teach Emergent Literacy Skills

A thesis

presented to

the faculty of the Department of Educational Foundations and Special Education

East Tennessee State University

In partial fulfillment

of the requirements for the degree

Master of Education in Special Education, Advanced Studies in Special Education concentration

by

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May 2024

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Keywords: cultural, story-based lessons, emergent literacy

ABSTRACT

Using Cultural Contextual Story-Based Lessons to Teach Emergent Literacy Skills

by

Elizabeth Smith

The purpose of this study was to investigate and determine the effectiveness of teaching an English Language Learner (ELL) teacher to use a task analysis comprising story-based lessons with cultural contextual literature to promote emergent literacy skills for a middle school-aged Hispanic ELL student with an intellectual disability (ID). Using a single-case multiple probes across skill sets design, one student with an ID and an ELL teacher participated in this study. The student was taught by the ELL teacher using story-based lessons with cultural contextual literature to promote emergent literacy skills. Results indicated a functional relation between story-based lessons with cultural contextual literature and emergent literacy skills. Future research needs to be carried out across multiple participants in varying age groups. Implications for practice and limitations will also be highlighted.

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Chapter 1. Introduction

Legal mandates (e.g., IDEA, NCLB) were created in order to promote access to the general education curriculum for students with disabilities. While this is generally implemented with good intentions, there is an extreme overrepresentation of cultural and linguistic minority students being identified with a disability. These minorities are most prevalent for African Americans and Latinos under the category's mild mental retardation, learning disabilities, emotional disturbance, and speech and language impairments (Rueda et al., 2008). When identifying children with disabilities, one of the first criteria examined is academic struggle. According to Morgan et al. (2017), minority students are known to be more likely to struggle academically, therefore more are identified as having a disability. In 2004, an amendment to the Individuals with Disabilities Education Act (IDEA) was created to have policies and procedures in place to help mitigate minority overrepresentation in children with disabilities (Individuals with Disabilities Education Act, 2004).

Minorities include those who are economically disadvantaged, different ethnic groups, and those who speak different languages. Of the minority groups, English Language Learners (ELLs) comprise the largest and fastest growing. In the United States, about 1.5 million ELLs are categorized as having a disability, and 75% of those are thought to be inappropriately placed. When students are inappropriately placed, they may have disadvantages compared to their non-disabled peers. These students may be placed in a separate special education classroom and have reduced access to the general education curriculum and social opportunities with non-disabled peers (Chachula, 2018). IDEA (2004) states that students must learn in their least restrictive environment. If these students are inaccurately labeled as having a disability, then they may not be receiving academic instruction in their individual least restrictive environments. If a student is

receiving special education services without need, it may prevent access for students who need services more from actually receiving those services (Chachula, 2018).

ELLs typically have language barriers, which prevent them from communicating their wants and needs effectively in English. Because of this, some may assume that this is because of an Intellectual Disability. Intellectual Disability (ID) has significant limitations in intellectual functioning and adaptive behavior. ELL students are more likely to be identified as having an ID than white students who speak English as a first language. Students with ID are characterized as having reading difficulties including identifying letters and blending sounds to read words. It is critical for students with ID to receive explicit and systematic instruction to specifically address phonics (Reed, 2013).

Over the decades, reading instruction for individuals with ID has completely changed. Functional and vocational skills were the main focus, until federal mandates like IDEA and No Child Left Behind Act directed the focus to more grade-aligned standards (Roberts & Leko, 2013). While functional skills promote inclusion and participation across settings, teaching these skills alone limits the expectations for this population. Evidence-based instruction is lacking for teachers to use and teach this population.

Research conducted in Courtade et al. (2012) promotes the importance of students with ID learning academic skills and functional living skills. This study details seven reasons why standards-based curriculum is important for this population. The first reason is this population has the right to the opportunity of an appropriate education. Before the mid-1970s, it was thought that this population should be part of institutions only. When this population was included in the general school population in public schools, it was found that they can learn some academic skills related to age-appropriate standards and they can benefit from interacting with nondisabled

peers. The second reason is that a standards-based curriculum is applicable to students with ID. The reason for state standards for all students, no matter their disability, is to enrich and prepare them for independent adult lives. It is important to generalize these skills learned to be relevant in daily life for all students. The third reason is the potential of students with ID is not always known. It was typical in the past to only teach this population about sight words, basic computation, and use of money. Studies now show that given the opportunity to learn more skills, students with ID can learn to read, identify and define vocabulary, learn algebra, social studies concepts, and science concepts (Courtade et al., 2012).

Emergent literacy skills are critical for students with ID to gain the needed skills to progress to higher level reading skills. Marie Clay promoted emergent learning, meaning the skills learned just before a child learns to read or write (McNaughton, 2014). These skills include print knowledge, phonological awareness, vocabulary, and oral language (Kosanovich et al., 2020). Emergent literacy skills are vital for children to learn before they begin to truly read. Becoming a skilled reader is a right all children must strive for. These skills do not always come naturally for children, especially for ELL students with ID. What instruction can be used to align with grade level standards, while still teaching emergent literacy skills such as phonological awareness, print principles, and emergent writing? (Browder et al., 2011) With students learning in their least restrictive environment, required by IDEA, students with ID need to be taught grade level content.

In the study conducted by Reed (2013), four ELL students with mild ID were taught phonics or sight word instruction in English only in a randomized single-subject design. The purpose of this study was to compare the effects of using phonics and sight word instruction of 4 middle school ELL students with ID. Scaffolding and opportunities for multiple practices were

given and sessions were completed every other day for 20 minutes over 8 weeks. The results did not indicate whether one intervention worked better than the other, but both interventions provided positive results and an increase in decoding and reading unfamiliar words.

Spooner et al. (2009) investigated using story-based lessons to teach emergent literacy skills to an ELL student with ID. The story-based lessons are based on the student's cultural background and some instruction is taught in Spanish using a fading model. The purpose of this study was to determine the effectiveness of teaching a paraprofessional a task analysis using literacy instruction to teach a student with ID of the same cultural background. As a result of this study, the cultural story-based intervention improved the student's book awareness, vocabulary skills, and listening comprehension, and the student could apply what she had learned when there was a return to English instruction only.

In conclusion, Spooner et al. (2009) showed promising results of gained emergent literacy skills for students with ID who are also ELLs. Using cultural contextual story-based lessons can be effective in teaching emergent literacy skills. To date, there is yet a study using this strategy for students with ID and are also an ELL at the middle school age. There is a paucity of emergent literacy instruction for ELL students with ID. This current study is a replication of the Spooner et al (2009) study and will prove if cultural contextual story-based lessons is effective in not only this population, but with this age group. Therefore, the purpose of this study is to investigate and determine the effectiveness of teaching an ELL teacher to use a task analysis comprising story-based lessons with cultural contextual literature to promote emergent literacy skills for a middle school-aged Hispanic ELL student with an intellectual disability. The research question this study is seeking to address is: What is the effect of a teacher using story-based lessons with cultural contextual literature to promote emergent literacy

skills to an ELL student with ID?

Chapter 2. Literature Review

Students with ID need interventions, strategies, and instruction that are tailored to their needs. While there are interventions and strategies to use, what kind of instruction has been proven to increase skills for this population? Instruction for this population must be research-based and standards-based. Courtade et al. (2012) shares that students have dramatically increased their academic skills because they have been given the chance to learn grade level content while their alternate assessment expectations have risen.

Balancing Functional and Academic Skills Instruction

Cannella-Malone et al. (2021) conducted a systematic review of literature on teaching academics to students with ID. Using 222 articles utilizing a single-case design, this research indicated that students with ID can make progress on academic skills and should be taught academic skills along with functional skills. This review shows that focusing on academics for students with ID can lead to increased functional skills in adulthood. These skills can lead to broader job opportunities and increase independent living skills.

Research conducted in Courtade et al. (2012) promotes the importance of students with ID learning academic skills. This study details seven reasons why standards-based curriculum is important for this population. The fourth reason described is the claim that “functional skills are not a prerequisite to academic learning” and the fifth reason is “standards-based curriculum is not a replacement for functional curriculum” (Courtade et al., 2012). While functional skills are important general life skills to learn, you are not required to learn them before you can participate in academic learning. It is also important to incorporate these functional skills with academic skills to maintain these skills and promote generalization of these skills.

Because functional skills are extremely important, it is equally important to balance

instruction in functional skills with instruction in academics. Completing a multiple baseline single-case study, Roberts and Leko (2013) studied the combination of functional and academic goals in a story-based lesson using adapted text on grade level content for students with moderate to severe ID in one-on-one instruction. Combining these two skills allows meaningful learning for students while incorporating grade level content as required. A task analysis was used by teachers when teaching a story-based lesson, and it monitored the functional goal and academic goal. This study resulted in correct responses on the functional and academic goals. However, correct responses on the functional goals increased more than the academic goals. This could apply to students with ID of all ages and provides an easy way for educators to target IEP goals. Authors indicated a need for future research to investigate conducting this study in a small group instruction and in the general education classroom to generalize learning across multiple settings.

Response Modes and Participation in Literacy Instruction for Students with ID

One challenge with students who have an ID is identifying a clear way for students to show what they know about what they are learning. Browder et al. (2011) focused on teaching story-based lessons using systematic instruction for students who displayed multiple response modes. In this multiple probe single case design study, the three students were selected to represent three different response modes (i.e., eye gaze, object selection, and touch response) to determine the relationship between the intervention and the student responses. As a result, reading comprehension increased as well as student engagement.

Technology usage for student response modes, as used in Williams et al., (2022), can be a way for students to show their responses during a story-based lesson. This study used an iPad with the Clicker Writer app for students to use to share responses in writing. Through this

multiple probe across participants design, students participated in a story-based lesson and used technology for their responses. Results of this study showed a functional relation between the intervention package during a story-based lesson. This study shows that students with ID can show what they have learned from story-based lessons through alternate modes of communication. These students could participate in a meaningful way, providing meaningful learning.

For students with ID, finding meaningful participation is a challenge. Browder et al. (2011) and Williams et al. (2022) used different response modes within story-based lessons. These studies show you can adapt story-based lessons according to what students need in order to make the learning and evaluation meaningful. For future research, replication with these different response options and even others should be completed. Other response options could be AAC devices including voice output devices and sign language.

Collaboration of Special Educators and Other Professionals

Special education teachers historically have not had training on how to teach grade level content, so collaboration between the special educator and the general education teacher are vital in order to successfully teach grade level content to students with ID.

Courtade et al. (2013) implemented a study that included a special education teacher and a general education teacher. A multiple-probe across participants design was used to teach story-based lessons by a special education teacher and general education teacher to students with intellectual disabilities and autism. The results of the study were successful in that both teachers could use the task analysis to teach students. Future research should explore the working relationships between the special education teacher and general education teacher.

In the same spirit of collaboration between teachers, Spooner et al. (2009) conducted a

study demonstrating a special education teacher and a bilingual paraprofessional working together to teach an elementary student with ID who is also an ELL using story-based lessons. This study used a single-subject multiple probe across skill sets design with some instruction in English and some instruction in Spanish. A story-based lesson was used to target emergent literacy skills such as identifying the title of the text, turning the page, pointing to words or letters in a sentence, and answering questions about the text. The increase in correct responses from baseline to intervention increased greatly and suggests that story-based lessons combined with teaching in native language helps teach these emergent literacy skills. The authors recommended future research focus on the amount of time English is used and the amount of time Spanish is used in instruction with this population. The authors shared that the responses of the student may have been different if they used one language more than the other.

Literacy Instruction for ELLs with ID

The purpose of the study conducted by Reed (2013) was to compare the effects of using phonics and sight word instruction of 4 middle school ELL students with ID. The results did not indicate whether one intervention worked better than the other, but both interventions provided positive results and an increase in decoding and reading unfamiliar words. Because the students were taught explicitly in English, one limitation is being unaware of how much the students were comprehending what they were reading (Reed, 2013). Combining emergent literacy instruction with comprehension instruction would provide more learning opportunities for ELL students with ID. It is a great achievement for students to be able to read, but it must be considered that it may even be better for students to understand what they are reading. To aid with comprehension, a combination of English instruction and Spanish instruction may be needed to advance this theory.

A rising strategy used to teach students emerging literacy skills is through a story-based lesson. Students can attain meaning from shared reading and focus on emergent literacy skills through read-alouds. Read-alouds can also improve comprehension and vocabulary. While most students enjoy being read to, it must be adapted to be more age appropriate for students in secondary school. Younger students tend to be exposed to literature with too simple vocabulary and large pictures while sitting on the floor or in an adult's lap. In middle school and high school, literature is more focused on using books with mature content, fewer pictures, and are usually seated in traditional desk seating (Browder et al., 2007).

A story-based lesson may be more adaptive for students with ID, including but not limited to abbreviated chapters, simpler vocabulary, and picture vocabulary for key words. For accessibility for physical disabilities, pages of the book can be reinforced by laminating them and putting them in a 3-ring binder. Because of these characteristics, the term story-based lessons are more age-appropriate for middle school and high school students. Adapted texts also provide easier inclusion within the general education population and participation in standards-based lessons (Browder et al., 2007).

The goal of literacy for students is to gain meaning of literature. To gain meaning, when teaching a story-based lesson, one should include using a task analysis. A task analysis involves using a concrete list to teach a sequence of responses. Using a task analysis, a teacher can monitor their fidelity and ensure they are teaching all steps when conducting a story-based lesson. Browder et al. (2007) conducted a study with the purpose of training teachers to use a task analysis to teach story-based lessons to middle school students with ID. Using a multiple-probe-across-participants design, the results indicated a functional relation between the teacher training and the number of steps from the lesson followed. Student participation increased, with

right or wrong responses, and student independent correct responses also increased. This shows that using a task analysis to promote fidelity can increase participation and independent correct responses by students with ID.

The purpose of the study by Spooner et al. (2009) was to determine the effectiveness of teaching a paraprofessional a task analysis using literacy instruction to teach a student with ID of the same cultural background. The paraprofessional used three books with Spanish cultural contextual background similar to herself and the student. The paraprofessional began the lessons speaking only in Spanish and reading the book in Spanish with Spanish words on the pages. Gradually, the paraprofessional used less Spanish and incorporated more English with her speaking as well as the books containing more English. As a result of this study, the cultural story-based intervention improved the student's book awareness, vocabulary skills, and listening comprehension, and the student could apply what she had learned when there was a return to English instruction only. This study shows a promising example of a combination of many literacy skills gained using one task analysis across multiple books in the student's native language.

These studies show that using story-based lessons can improve the participation of students with ID in story-based lessons and learning emergent literacy skills. Some studies focused on accuracy of responses from students, while others focused on increased engagement and participation of the students. When using story-based lessons, the focus of the outcome needs to be clear - is the desired outcome participation or accurate responses? Engagement may need to be the first step for some students. When they've mastered engagement, then comprehension may become the focus. There must be a continuum of research on evidence-based practices to serve this population of students with intellectual disabilities.

Chapter 3. Methods

Participants

Criteria for eligibility of the ELL teacher was (a) being bilingual in English and Spanish and (b) being a certified ELL teacher and also certified in special education. Criteria for the student included (a) the primary language spoken is Spanish and receives ELL services, (b) receives special education services for an ID, (c) considered an emergent reader (unable to read 20 sight words according to the classroom teacher), and (d) is a middle school student.

Alex was a thirteen-year-old boy with ID. He had an outside diagnosis of Down Syndrome from a doctor. As a result, the student exhibited both cognitive and physical challenges including mild to moderate IQ, protruding tongue, and poor muscle tone. In 2018, Alex was administered the *Kaufman Assessment Battery for Children-Second Edition*, which measured a range of abilities that are relevant in assessing a child's intellectual disability. With standard scores between 85-115 being considered in the average range, Alex obtained a score of 40 at the 0.1st percentile. Alex had communication delays and used few words (i.e., yes, no, bye bye, stop) in Spanish and in English to communicate. To support his communication, he used an iPad with Language Acquisition through Motor Planning (LAMP)TM app. Alex used LAMP throughout his school day to indicate what he wants to eat for breakfast and lunch, communicate when he needs to use the restroom, answers yes or no questions, and communicates other wants or needs (wants to use a red ball for gym, needs a pencil, wants his computer). He mostly used English to communicate, but sometimes used Spanish words on LAMP. Alex could reliably combine 2-3 words together using LAMP to communicate.

Alex could spell and write his first name, trace letters and words, write copies of words on the same sheet, sort items by shapes, size, and color, identify 18/26 letters, and identify the

numbers 0-10 with 40% accuracy. He was working on letter identification and most common letter sounds, as well as beginning rote counting and basic number understanding. Alex lacked understanding of basic concepts, had difficulty understanding abstract concepts/materials, and had language delays. This interfered with his acquisition and comprehension of higher-level content, ability to understand and follow directions and routines, and negatively impacted his rate of learning. Alex lived at home with younger siblings and two parents. Spanish was the only language spoken in his household.

Mrs. Allen was 49 and had taught for nine years at the time of the study. She was a certified teacher for special education and ELL students. She taught elementary students and middle school students for nine years. She had experience working with students with disabilities who also qualify for ELL services for nine years. She worked with Alex giving him his ELL services for 3 years while he was in middle school. They already had rapport and commonly work together one-on-one.

Setting

The study took place in a middle school in an urban area in the southern United States. The school had around 750 students, sixth grade through eighth grade. In the school, special education supports and ELL supports were provided from most intensive supports to inclusion supports. The classroom was made up of 10 students taking the Tennessee Alternate Assessment, including Alex, who received intensive special education services in this classroom for approximately 40% of the school day. Six additional students also accessed special education services in this classroom for only 45 minutes of the school day. All sessions took place in the student's classroom, a self-contained classroom for most intensive supports. During sessions, 3 students were present on the opposite side of the room with limited visibility to Mrs. Allen and

Alex, with supervision by a paraprofessional and the special education teacher, myself.

For this study, baseline and intervention were both completed in this self-contained classroom. During sessions, the ELL teacher and the student sat at a table by themselves with little distractions around them (no other students, dimmed lighting, no access to toys/fidgets). The average intervention time was 15 minutes long, with an allotted time of 25 minutes to complete. Alex needed flexible time limits due to shortened attention to task.

Materials

For this study, the books chosen for intervention were culturally relevant for the student. The materials were chosen by the student participant. These are books the student chose for pleasure, and were picked by the student to read during the study. While these books are not traditionally seen as age/grade appropriate, the student was allowed to choose his own books for the study in order to allow student choice and increase overall interest. The first book, *Los Cinco Patitos (The Five Ducklings)* by Pamela Paparone, is written in Spanish only. The second book, *Daniel el Dragon (Daniel the Dragon)* by C. Robinson-Echevarria, is written in Spanish and English. The final book, *Abuela (Grandmother)* by Arthur Dorros, is written in English only. These books have pictures and words associated with Alex's culture and native language that would catch his attention.

There was one binder for the ELL teacher to use for the task analysis. The task analysis included 14 steps. See Figure 1. The binder included the task analysis she will use each time for intervention. The binder included prediction questions that went along with each book with two answer selections. The prediction question was typed, "What do you think this story is about?" Below this question was two picture answer choices for the student to point to and acknowledge verbally or by LAMP, if he chooses. The next pages included vocabulary words that were

introduced in that text. When Mrs. Allen presented these materials, she read the questions and vocabulary in Spanish and then read the questions and vocabulary in English.

Figure 1

Using Cultural Contextual Story-Based Lessons to Teach Emergent Literacy Skills Teacher Task Analysis

- ___ 1. Provides an anticipatory set
- ___ 2. Reads title of the story and asks student, “Can you point to or tell me the title?”
- ___ 3. Reads author’s name and asks, “Can you point to the author of the book?”
- ___ 4. Models proper book orientation for reading and allows student to orient the book: (1) Orients the book without being told, then (2) prompt as necessary.
- ___ 5. Models opening the book, gives the student the book, and waits for student to (1) open the book without being told, then (2) prompts as necessary.
- ___ 6. Asks prediction question (What do you think the story will be about?) and provides the student with two choices.
- ___ 7. Reads story aloud to the student.
- ___ 8. Allows student to anticipate turning page without being told.
- ___ 9. Ask student to point to/say new vocabulary words (Can you find our new vocabulary word?).
- ___ 10. Ask student to read the anticipated story line (Can you help me read out story line?).
- ___ 11. Points to each word in chosen sentences while reading aloud on “text point page” and designates a place for student to point to a line while teacher reads aloud.
- ___ 12. Go back and check if prediction was correct.
- ___ 13. Ask comprehension question of the student.

___ 14. Asks comprehension question of the student with the use of a vocabulary word.

Note. Reprinted from “Teaching Emergent Literacy Skills Using Cultural Contextual Story-Based Lessons”, by Spooner et al., 2009, *Research & Practice for Persons with Severe Disabilities*, Vol. 34, p. 106.

Experimenter

The author of this study served as the special education teacher. She had a bachelor’s degree and a K-12 Special Education Certification. She had been teaching for five years as a special education pull-out and push-in teacher in the same school as the study. The time of the study was her first year teaching in the same self-contained classroom where Alex participated. At the time of the study, she was enrolled in a Master’s program for Special Education with a focus on Comprehensive licensure (i.e., low incidence disabilities) advanced studies track. Before baseline and intervention, the experimenter taught the ELL teacher the task analysis for this study and the steps for interobserver agreement to collect data throughout the study. Each time a new skill set was introduced, the experimenter taught the new skill set to the ELL teacher during 20 minute sessions. The ELL teacher was already familiar with task analyses and system of least prompts, so these concepts were reviewed briefly.

Research Design

To determine the effectiveness of using cultural, contextual story-based lessons, the research design used was a single-case multiple probes across skill sets (Ledford & Gast, 2018). The special education teacher initially probed the student in baseline conditions for five sessions to determine a low and stable trend prior to intervention. When it was determined that the trend was low and stable, intervention was introduced by the ELL teacher. Because of the multiple steps of the task analysis, a forward chaining sequence was used. The student was required to

reach mastery in a skill set before he moved on to the next set. When the student completed a skill set, the next book was presented and used. The student used skills he learned from the previous skill set and applied them to the next book while also learning new skills from a new skill set.

Independent Variable

The independent variables were story-based lessons using culturally relevant literature and task analysis. With a story-based lesson, the ELL teacher used a task analysis and the system of least prompts to teach book interaction responses to the student. Two important facets of this instruction is to include books relevant to the student's culture and to implement instruction in Spanish while gradually introducing English instruction to the intervention.

Measures

Dependent Variable

The dependent variables are the student responses to the task analysis and skill sets for each story. The task analysis includes 14 steps used within three skill sets and a checklist of these steps to monitor the student's responses. A forward chaining sequence was used in sets of four. Each skill set had 4 total skills for an opportunity to have 4 out of 4 responses correct. See Table 1 from Spooner et al. (2009). The ELL teacher would give the response prompt according to the skill sets and wait 5s. If no response or incorrect response, she would respond with a verbal prompt. After 5s, if no response or incorrect response, she would give a gestural prompt and wait 5s. If no response or incorrect response, she would give a physical prompt. If the student did not answer and required a prompt, the prompt level needed to respond were recorded along with a + or - on the correct or incorrect answer. The responses were scored as correct or incorrect (+ or -). Correct responses were recorded only if the student responded independently.

When the student performed three out of four skills correctly in five consecutive trials, this was considered mastery of that skill set.

Table 1

The Culturally Contextual Story-Based Lesson Student Skill Sets

The Culturally Contextual Story-Based Lesson Student Skill Sets		
Skill Set 1	Skill Set 2	Skill Set 3
Points to or says title	Answers prediction question	Text points to words in a sentence
Points to our says author's name	Turns at least one page	Reviews prediction question to determine if correct
Orients book	Identifies or points to new vocabulary word in the story	Answers a question related to the story
Opens book	Repeats storyline independently	Answers a question with the use of a new vocabulary word

Note. Reprinted from “Teaching Emergent Literacy Skills Using Cultural Contextual Story-Based Lessons”, by Spooner et al., 2009, *Research & Practice for Persons with Severe Disabilities*, Vol. 34, p. 106.

Social Validity

Social validity was gathered using a Likert scale to measure the ELL teacher's perception of both the intervention and outcomes. The ELL teacher first looked at the baseline data and the intervention data to see the impact of intervention. After this visual analysis, the Likert scale was given to them. Additionally, the student was asked their thoughts on the intervention by asking yes/no questions. The student's progress during the intervention was discussed during regularly scheduled parent/teacher conferences and quarterly progress reports.

Data Analysis

Data was analyzed through visual analysis. Visual analysis was used to identify a

functional relation. Daily visual analysis was conducted by comparing data within phases and across adjacent phases and tiers to determine if changes in the dependent variable were due to the implementation of the independent variable. Data patterns were analyzed within and between phases to assess changes in level, trend, variability, immediacy of effect, overlap, and similarity of data patterns across phases. The percentage of nonoverlapping data (PND) were used to calculate effect size. For calculating PNDs for each participant, a PND calculator was used (Tarlow & Penland, 2016). PND scores range from 0%-100%. Scores 90% and above indicate that the intervention was very effective, 70%-89% indicate that the intervention was effective, 50%-69% indicate a questionable effect, and below 49% indicated an ineffective intervention (Carr, 2014).

Procedures

Baseline

Baseline was collected to determine pre-intervention levels on the dependent variable. As with the Spooner et al. (2009) study, a minimum of five baseline sessions was needed and was continued until the data was low and stable. The special education teacher delivered the baseline instruction and probes to the student. The baseline phase included instruction without a book relevant to the student's cultural context, without the support of Spanish instruction, and without the use of forward chaining. The book *Earth Dance* by Joanne Ryder was chosen as the baseline book to determine the student's baseline level of these skills. The 14 steps in the task analysis were used and responses recorded using a + or - according to correct or incorrect student responses. The student was given 5 seconds to respond to each skill. If there was no response, data were recorded and the instructor moved on with the steps of the task analysis. The student was praised only for attending. Reinforcement or error correction for right or wrong answers did

not occur in baseline.

Intervention

The ELL teacher was taught the task analysis separately by the special education teacher. During Skill Set 1, the ELL teacher taught the student using the book, *Los Cinco Patitos (The Five Ducklings)* in Spanish only, the first 4 skills. Once the student met mastery for Skill Set 1, the ELL teacher was taught the steps needed teach Skill Set 2. During Skill Set 2, the student was taught in Spanish and English 8 skills (i.e., Skill Sets 1 and 2) using the book, *Daniel el Dragon (Daniel the Dragon)*. Once mastery was completed, the ELL teacher was taught the steps needed to teach Skill Set 3. During Skill Set 3, the ELL teacher taught the student all 12 steps in the three Skill Sets in English only (Skill Sets 1, 2, and 3) using the book *Abuela (Grandmother)*. Instruction in intervention phase occurred three times a week for about 10 - 15 minutes.

Generalization

Throughout the study, the special education teacher conducted EGP using the same book, *Earth Dance*, across sessions in which there was a return to baseline. The same 14 step task analysis was used for EGP. The probes were implemented to control for the potential internal validity issue of conducting baseline in English and the intervention predominately in Spanish.

Maintenance Phase

Mastery for the student is considered as three of four items correct for five consecutive sessions. Once the student mastered the set of skills, maintenance was checked later using the same strategies as in baseline. One-on-one instruction was conducted two times a week for approximately 15 to 20 minutes. Throughout the study, the special education teacher conducted English Generalization Probes (EGP) using the same book across sessions in which there was a return to baseline. The probes were implemented to control for the potential internal validity

issue of conducting baseline in English and the intervention predominately in Spanish.

Interobserver Agreement

For interobserver agreement (IOA), point-by-point agreement for trial-based recording systems was used by the ELL teacher and the special education teacher. Approximately 25% of sessions during baseline and intervention were assessed for IOA. The criterion for sufficient IOA was at least 90% or higher. If IOA was below 90%, the ELL teacher and the special education teacher met to review any variance in the data and come to an agreement before moving forward. Each probe was observed per condition, and the student's responses were recorded by each person individually. To calculate the percentage of agreement of responses between the ELL teacher and the special education teacher, the number of agreements were divided by the number agreements plus the number of disagreements multiplied by 100. During both baseline and intervention, there was not a time when IOA was below 90%.

Procedural Fidelity

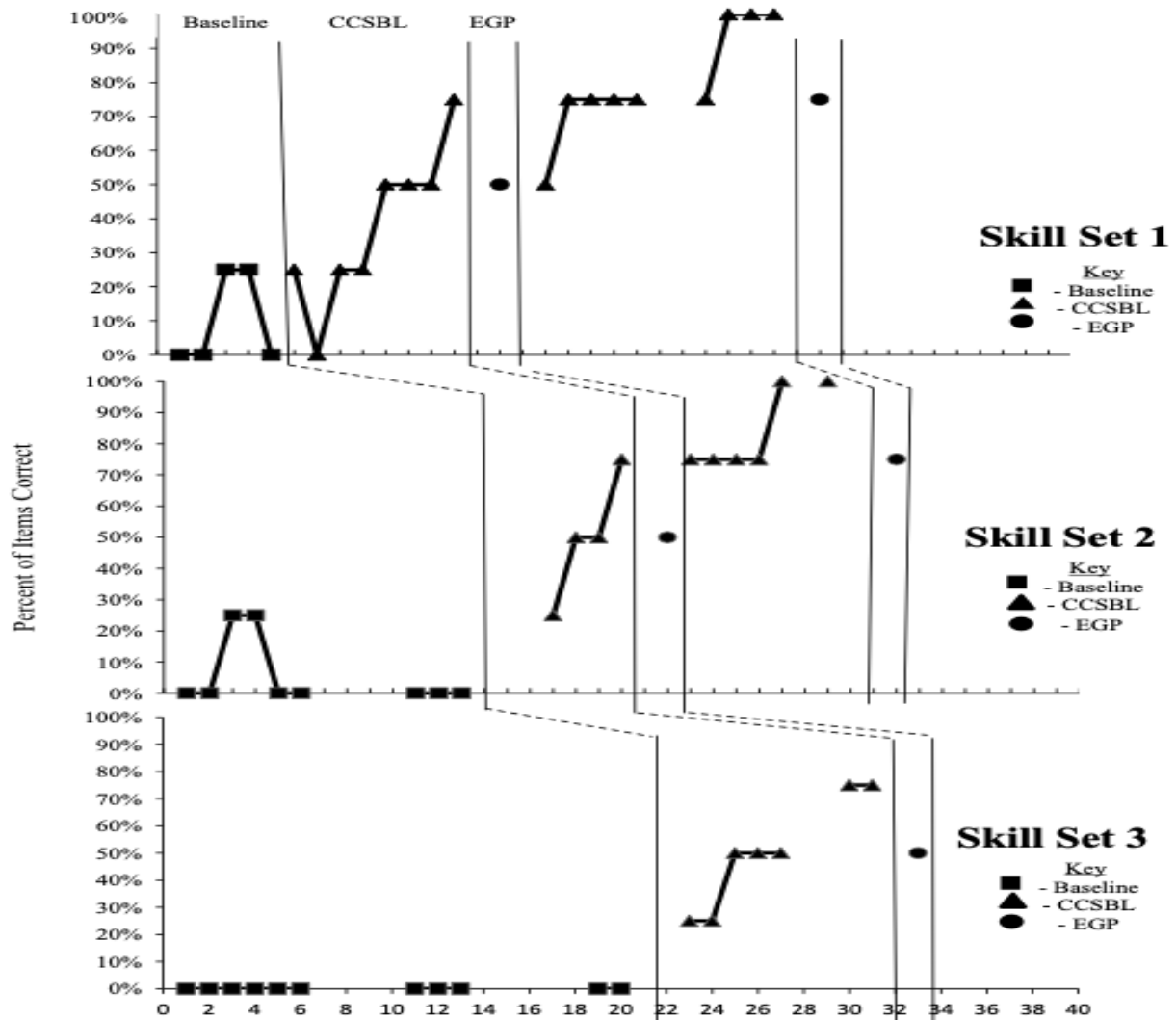
Procedural fidelity (PF) was collected at least 25 percent of all sessions in baseline and intervention phases. PF was collected by the special educator and the number of steps implemented correctly were divided by the total number of steps to implement and multiplied by 100. If PF dropped below 90%, the ELL teacher and special education teacher met to discuss missed steps and practiced until the ELL teacher implemented all steps correctly.

Chapter 4. Results

The student had four potential responses within each of the three skill sets. Figure 2 shows the probes collected throughout the study representing the number of independent correct responses per session for each skill set. Shown in the graph are the baseline responses, cultural story-based lessons responses, and EGP responses. The EGP showed correct responses maintained throughout the intervention.

Figure 2

Cultural Story-Based Lessons: Number of Correct Items Across Skill Sets



Skill Set 1

The student showed a steady ascending increase of correct responses from low, stable baseline levels ($M = .4$) to intervention levels ($M = 2.4$). Moreover, there was 81% Percent of Nonoverlapping Data indicating a moderate effect size. In addition, the prompting needed to respond faded over time from more intrusive prompts to less intrusive prompts. Finally, the generalization probes indicated the student could demonstrate some generalization by performing 2 out of 4 correct on the first EGP and increased on the second EGP to 3 out of 4 correct.

Skill Set 2

The student showed a steady ascending increase of correct responses from low baseline levels ($M = 0.2$) to intervention levels ($M = 2.8$). Moreover, there was 90% Percent of Nonoverlapping Data indicating a large effect size. Finally, the generalization probes indicated the student could demonstrate some generalization by performing 2 out of 4 correct on the first EGP and increased on the second EGP to 3 out of 4 correct.

Skill Set 3

The student showed a steady ascending increase of correct responses from low baseline levels ($M = 0$) to intervention levels ($M = 2$). Moreover, there was 100% Percent of Nonoverlapping Data indicating a very effective, large effect size. Finally, the generalization probes indicated the student could demonstrate some generalizing by performing 2 out of 4 correct on the EGP.

Maintenance Phase

Mastery for the student was considered as three of four items correct for five consecutive sessions. Once the student mastered the set of skills, maintenance was checked later using the same strategies as in baseline. One-on-one instruction was conducted two to three times a week

for approximately 15 to 20 minutes. Throughout the study, the special education teacher conducted EGP using the same book, *Earth Dance*, across sessions in which there was a return to baseline. The probes were implemented to control for the potential internal validity issue of conducting baseline in English and the intervention predominately in Spanish. Maintenance of Skill Set 1 was 2 out of 4 correct on the first probe and 3 out of 4 correct on the second probe. Maintenance of Skill Set 2 was also 2 out of 4 correct on the first probe and 3 out of 4 correct on the second probe. Maintenance on Skill Set 3 was 2 out of 4 correct.

Social Validity

Post-intervention, the ELL teacher looked at the baseline data and the intervention data to see the impact of intervention. After this visual analysis, the Likert scale with 4 statements and an open-ended question was given to her. On a scale of 1-5, the Likert scale options ranged from strongly disagree to strongly agree. The open-ended, short answer question stated: “Do you feel cultural story-based lessons could benefit English-language learners with a moderate or severe intellectual disability?”

Question 1 stated “Using story-based lessons infused with cultural contextual literature was a helpful way to build student literacy skills.” The ELL teacher responded with a score of 3. Question 2 stated “The cultural story-based lessons were meaningful to the student, allowing the student to enjoy the instruction and to comprehend the lesson. The ELL teacher responded with “4 - Once he (the student) decided to engage, yes, he seemed to enjoy it and got into the pictures especially.” Question 3 stated “The story-based lessons were easy to implement.” The ELL teacher responded with a score of 5. Question 4 stated “I am interested in implementing story-based lessons in the future.” The ELL teacher responded with a score of 5. Her response to the open-ended question was “I think it has great potential to be effective depending on the level of

participation and ability (of the student). For Alex, I think starting out with a short, quick text would have kept him engaged longer to build his patience and stamina for the longer books.”

Alex was asked “Did you enjoy reading these books with Mrs. Allen?” Alex nodded his head yes and smiled. All of the books from the study were then laid out and the experimenter asked which book he liked the most. Alex picked *Daniel el Dragon* and pressed the “dragon” button on his iPad. Alex was asked if he would like to read more books like these, in English and Spanish, and he nodded his head yes. He was also asked if he would read more books about Spanish traditions and families and he pressed the iPad button for “fiesta.” It is unknown if he meant that he wanted to read a book about a fiesta, or if he was indicating something else.

Interobserver Agreement

While the special education teacher obtained baseline data, the trained ELL teacher was the observer for IOA. While the ELL teacher obtained intervention data, the trained special education teacher was the observer for IOA. Approximately 25% of sessions during baseline and intervention were assessed for IOA. The criterion for sufficient IOA was at least 90% or higher. If IOA was below 90%, the ELL teacher and the special education teacher met to review any variance in the data and come to an agreement before moving forward. Each probe was observed per condition, and the student's responses were recorded by each person individually. To calculate the percentage of agreement of responses between the ELL teacher and the special education teacher, the number of agreements were divided by the number agreements plus the number of disagreements multiplied by 100. During both baseline and intervention, there was not a time when IOA was below 90%. IOA for baseline in Skill Sets 1 and 2 were at 92%. IOA for baseline in Skill Set 3 was at 94%. IOA for intervention in Skill Set 1 was at 94%. IOA for intervention in Skill Set 2 was at 92% and in Skill Set 3 was 100%.

Procedural Fidelity

PF was collected at least 25 percent of all sessions in baseline and intervention phases. While the special education teacher obtained baseline data, the trained ELL teacher collected PF data on a checklist. While the ELL teacher obtained intervention data, the trained special education teacher collected PF data on a checklist. PF was collected by the special educator and the number of steps implemented correctly will be divided by the total number of steps to implement and multiplied by 100. If PF dropped below 90%, the ELL teacher and special education teacher would meet to discuss missed steps and practice until all steps were implemented correctly. PF for baseline in Skill Sets 1 and 2 both averaged at 98%. PF for baseline in Skill Set 3 was at 97%. PF for intervention in Skill Set 1 was at 98%. PF for intervention in Skill Set 2 was 98% and in Skill Set 3 was 100%.

Discussion

The purpose of this study was to investigate and determine the effectiveness of teaching an ELL teacher to use a task analysis comprising story-based lessons with cultural contextual literature to promote emergent literacy skills for a middle school-aged Hispanic ELL student with an intellectual disability (ID). Using a single-case across multiple skill sets design, one student with an ID and an ELL teacher participated in this study. The student was taught by the ELL teacher using story-based lessons with cultural contextual literature to promote emergent literacy skills. Results indicated a functional relation between using story-based lessons with cultural contextual literature to promote emergent literacy skills. The student increased his emergent literacy skills and made progress with the intervention as it was planned.

During baseline for Skill Set 1, Alex's attention was not easily redirected, and he played with the book. Given the first book in intervention, *Los Cinco Patitos*, you could visibly see the

“light” in his eyes brighten up. He automatically paid more attention by participating because he could hear the Spanish words. This may indicate that using Spanish, which is part of his culture, positively affected his attention and participation. While the Spanish component did increase attention, this student was easily distracted. Due to variability in the first few sessions, positive reinforcement was used to gain the student’s attention through the use of a sticker chart. He has shown great growth in attention in his regular classes using a reward system, so this was also put in place for the purpose of this study. System of least prompts was also introduced to increase correct responses and was continued through the other Skill Sets.

During baseline for Skill Set 2, Alex had a difficult time paying attention and connecting with the book, and therefore had difficulty completing the skills in Skill Set 2. Given the book *Daniel el Dragon*, he instantly engaged much better. He tried to imitate the Spanish words verbally and continuously hit the “dragon” button using LAMP. Repeating the story line was difficult for Alex to imitate using speech, so he used LAMP to try to answer. There was less variability in this skill set which indicates stronger demonstrations of effect. System of least prompts was followed and positive reinforcement of stickers were used along with his sticker chart. There was immediacy of effect in Skill Set 2.

During baseline, Alex struggled to complete Skill Set 3. This higher-order thinking was very difficult for him. When the book *Abuela* was introduced, he immediately pressed the matching word “abuela” (grandmother) using LAMP. Alex would attempt to answer questions using LAMP, but because he is still working on using vocabulary in the app, he struggled greatly with using the specified vocabulary words. There was less variability in this skill set which indicates stronger demonstrations of effect. System of least prompts was continued and stickers

were used for positive reinforcement for attendance to his sessions. There was immediacy of effect in Skill Set 3.

Related studies such as Browder et al. (2007) introduced training teachers to use a task analysis with a story-based lesson to middle school students with ID. Results were positive and showed that teachers could be trained to use a task analysis with fidelity and that student response participation increased and their independent correct responses increased. The current study also showed that an ELL teacher and special education teacher could be trained to use a task analysis with fidelity. Student participation increased and independent correct responses increased. This research adds to recommendations of using story-based lessons with middle school students.

Compared to the Reed (2013) study focusing on phonics and sight word instruction to ELL students with ID, the current study with student who was an ELL with ID showed a direct relation between story-based lessons and the focus on book awareness, vocabulary skills, and listening comprehension. Results in both studies showed an increase in targeted skills, however one study used specifically phonics and sight word instruction while the other used story-based lessons. The targeted population were both ELL students with ID. Reed (2013) used English-only instruction and the current study used a combination of Spanish and English instruction and materials. Results by both studies indicate a need for more research done with and without Spanish instruction.

The current study is a replication of the study by Spooner et al. (2009). Both studies were similar in that they focused on one ELL student with ID and used one teacher to give Spanish and English instruction using a task analysis to teach culturally-relevant story-based lessons. The results of both studies show a positive relation between story-based lessons and culturally-

relevant books. This study extended the literature to include a middle school student, while the replicated study included an elementary student.

Limitations

A few limitations were present during the current study. Visually analyzing the data shows that the EGP was better than baseline, but more bilingual instruction could have been necessary to improve the student's performance. More data points and bilingual instruction when asked comprehension questions should have been collected to confirm stability. In addition, the plan was to replicate this study as it was written by Spooner et al. (2009) by having strictly Spanish instruction only in Skill Set 1, half English and half Spanish instruction in Skill Set 2, and full English instruction in Skill Set 3. While the ELL teacher already knew much Spanish, she could not complete the entire Skill Set 1 instruction in strictly Spanish only. She spoke in as much Spanish as she could but had to sub in some English words to her instruction according to her Spanish speaking skills.

Next, the different languages used could be considered a confounding variable because the baseline condition was completed in English, while the rest of the Skill Sets were completed in a mix of English and Spanish. The outcomes may have been different if the book used for EGPs was delivered in Spanish instead of English. This, however, was done in English to further demonstrate the difference in English-only instruction and content compared to Spanish instruction and culturally-related content.

Furthermore, time constraint was the third limitation. In the beginning of the study, the student's school was out for a week due to snow days, then the student participated in ELL state testing, and then Spring Break occurred near the end of the study. The research team decided to move quickly from Skill Set 2 to Skill Set 3 in order to have time to gather data for the last skill

set without attaining the previously set criteria for mastery. Even though there was less time in intervention from Skill Set 2 to Skill Set 3, the student demonstrated a significant increase in trend between the Skill Sets.

Another limitation included the multiple interruptions to the daily schedule such as fire drills, staff absences due to sickness or trainings, intruder drills, and therapy sessions (OT, Speech, PT). These interruptions caused several breaks in intervention. Consistent exposure to the intervention may have resulted in faster skill acquisition, but despite these interruptions, the data still shows a positive increase in skills gained.

A fifth limitation is the opportunity to generalize results, as only one student participated in the study. It is unknown how much of a role positive reinforcement played in the success of the study. While cultural characteristics were shown to have a positive effect on Alex's acquisition of skills, it is unknown how much of an effect it had on his acquisition versus him learning the skills. Given the comprehension questions, Alex was given two choices, therefore he had a 50/50 chance of getting the question correct and limited his ability to respond to other choices, correct or incorrect. Another limitation is that the comprehension questions in Skill Set 3 were not varied across sessions, so he could have memorized the answers rather than learning the meaning from the text that was read aloud.

The student's verbal ability is a sixth limitation. Alex relied on using LAMP to communicate the entire study, except for words he was able to say inconsistently like yes, no, bye bye, and stop. The vocabulary words for each book were all included on one page of LAMP, so when asked questions using vocabulary, he sometimes had to click on 1-2 words first before the correct word was chosen. While the storyline was customized for each story, the student knew where to find the button that had the recorded storyline on it every time he was asked to

repeat the storyline.

Finally, books for young children were chosen for this study. The student was a thirteen-year-old in middle school. While the books were not age/grade appropriate, this study focused on books the student chose for pleasure, and the books were picked by the student to read during the study. The reason the student was allowed to choose his own books was because the focus was more on lower level comprehension, which did not require age/grade appropriate books. This is a limitation due to not providing age/grade appropriate material for the student.

Recommendations for Future Research

Based on study results and limitations, further research is needed to determine the full effects of using story-based lessons with cultural contextual literature. To teach emergent literacy skills, future research should be completed regarding systematic instruction for Spanish and English instruction. Scaffolding this instructional model is crucial for systematically teaching this population. This could demonstrate stronger results as well as develop a scaffolded instructional model using both languages.

Next, the study conducted by Spooner et al. (2009) and the current study used only one student participant. Future research should include multiple students should participate in single studies using story-based lessons with cultural literature. This study was completed in a one-on-one setting due to only having one participant that met the inclusion criteria. Future studies should include larger groups of 3-4 students to provide more data and compare the growth of giving intervention to more than just one student. A different setting may have a larger effect on the outcome.

For the current study, the presentation of the skill sets were given using forward chaining, as it was used in Spooner et al. (2009). The use of forward chaining was beneficial in that the

student could learn the logical sequence of the task from beginning to end. Future research could include total task of the skill sets. The benefit of this would be the student learns the entire task without interruptions and can independently complete any steps that have been previously mastered. Total task chaining could determine if this method would provide either a higher rate of learning or enhance generalization of the skills.

Last, future research needs to be conducted on using age/grade appropriate text. The younger books were chosen by the student for the purpose of this study. Age/grade appropriate books would need to be translated into Spanish and English for the current study. Data may have been different if age/grade appropriate texts were chosen.

Implications for Practice

Cultural story-based lessons give educators the ability to teach in a culturally responsive way and honor students' preferences and form relationships. These lessons are a gateway to fostering student engagement and progress in emergent literacy skills. It's also important to note that the special education teacher does not need to be the sole provider for students' academic needs. This study used an ELL teacher to provide instruction with supervision of the special education teacher. In Spooner et al. (2009), a paraprofessional provided instruction under the supervision of a special education teacher.

Story-based lessons and/or cultural contextual lessons could be combined with other subjects than reading, such as science, social studies, and math. These interventions provide a link to students' cultures in an inclusive setting to foster social and academic skills simultaneously. Researchers and teachers must collaborate linguistically and culturally with parents and community to better develop these strategies for instruction.

Conclusion

This study answered the research question: What is the effect of a teacher using story-based lessons with cultural contextual literature to promote emergent literacy skills to an ELL student with an ID? Overall, this study showed a positive effect and indicated a functional relationship between using story-based lessons with cultural contextual literature to promote emergent literacy skills. The student increased his emergent literacy skills and made progress with the intervention as it was planned.

Finally, with future research and implications for practice, using cultural contextual story-based lessons could serve as a great method for teaching emergent literacy skills to ELL students with an ID across subjects and environments. This method can give students the skills they need in order to progress in their reading skills and generalize across all academic subjects.

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