

Creating Audio Books for Children with Visual Impairment: The Collaborative Approach Leading to Virtual Learning

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Collaborative learning encourages active learning opportunities. The concept of virtual learning was established to enable students to learn across international boundaries. Audio books can be an invaluable learning medium for children with visual impairment. The specific aim of this project was to help the children with visual impairment in India to learn spoken English in an interesting and engaging manner. The purpose of the study was to create collaborative learning opportunity for six graduate students enrolled in an early childhood course at a university on a digital platform to promote virtual learning to make audio books for children with visual impairment in India. Audio books were developed collaboratively by the students and then were sent electronically to the School for the Blind. During the collaborative project, not only did the students receive feedback from the instructor but also received constructive comments from each other throughout the process. Data was analyzed qualitatively. The important conclusion of this case study approach was the learning outcome of the students who felt it was a time-consuming effort, but a rewarding experience.

Keywords: audio books, children with visual impairments, virtual learning, collaborative learning, India

INTRODUCTION

Virtual learning has revolutionized learning among all ages. Students use computers and the Internet to learn virtually. Collaborative learning is the educational approach involving joint intellectual effort by students, or students and teachers to enhance learning through working together. Teachers collaborate to learn from each other about meeting their students' need. With growing popularity of virtual learning, teachers

could take advantage of technology to address students' needs especially for children with visual impairment. Audio books can be an invaluable tool for students who are visually impaired but are not a replacement of braille books. Since Braille books could be very heavy to carry, the popularity of audio books grew. The specific aim of this project was to help the children with visual impairment in India to learn spoken English in an interesting and engaging manner. The purpose of the study was to create collaborative learning opportunity for the six graduate students who were enrolled in an early childhood course at a university to create virtual learning of spoken English for the children with visual impairments in India.

LITERATURE REVIEW

Collaborative learning theory has its root in Vygotsky's idea of Zone of Proximal Development. This theory involves peer learning from each other and it fosters deep and higher level thinking. In this theory learners depend on their knowledge, with the addition of others' assistance, to accomplish more difficult tasks that they were unable to achieve on their own.

The resource through virtual collaborative learning was designed to encourage active learning opportunities. The concept of virtual collaborative learning was established to enable students to learn together across national boundaries. Huntington & Sudbery (2005) mentioned creating a flexible and adaptable open learning environment with strong international and cross-cultural dimensions for everyday education and learning.

Despite the potential of collaborative learning in this virtual world, few studies examined whether it is more effective in student achievements than teacher-directed instruction. A research study by Cho and Lim (2017) indicated that collaborative problem solving and observing was more effective in facilitating and maintaining intrinsic motivation for secondary students than teacher-directed instruction. However, in another study it was found that the teachers must create appropriate social and instructional interventions in order to promote effective learning (Kahai, Jestire, & Rui, 2013).

ASSISTIVE TECHNOLOGY FOR STUDENTS WITH DISABILITIES:

In the survey of assistive technologies and applications for blind users on mobile platforms, Csapó, Wersényi, Nagy, & Stockman (2015) summarized some of the recent developments in audio based assistive technologies for the blind community. These technologies have audio capabilities into standard mobile devices and are user-friendly. Similarly, Bhowmick & Hazarika (2017) compiled an extensive database of assistive technology for the visually impaired. The results from their studies revealed that there has been a continuous growth in the field of assistive technology for persons with visual impairment., Further, they predicted a further growth in this area which will help individuals with visual impairment.

One of the best practices in technology was reported by Fletcher-Watson, Pain, Hammond, Humphry & McConachie (2016) about the design, development, and implementation of an iPad app for very young children with autism. The main focus of this design was for a therapeutic and educational purpose. Similarly, another review of walking assistants for visually impaired people was examined by Islam, Sadi, Zamli & Ahmed (2019). The review discussed the recent innovative technologies developed for the visually impaired to help them in walking. This review presented walking assistants for the visually impaired people. However, the study by Singhal, Singhal, Bhatnagar & Malhotra (2019) focused on accessibility when designing assistive technology for visually impaired learners. In this project, Android packet kit was installed in smart devices to help visually impaired learners get accessibility and usability of their mobile devices.

AUDIO BASED LEARNING TOOLS AND AUDIO BOOKS FOR CHILDREN WITH VISUAL IMPAIRMENT

Audio-based virtual learning environments have been used increasingly to foster cognitive and learning skills. Studies have also highlighted that the use of technology can help learners to develop effective skills such as motivation and self-esteem. For children with visual impairments, Sanchez & Saenz (2006) presented the design and usability of Audio Chile, a 3D interactive virtual environment. The results indicated that during interaction sound helped the children to get attention and motivation. Specifically, Fansury, Lutfin, & Arsyad (2019) studied the implementation of audio books as teaching media for blind students to learn English. The results of the study indicated that the implementation of audio books helped students in the learning process. Since audio books are convenient to use anywhere and anytime, student motivation in learning was increased. Ozgur & Kiray (2007) also evaluated the audio course book project as support course materials in distance education for the blind students. This project helped about 300 blind learners to study on their own and provided them with the opportunity to study any subjects in the book at their convenience. With the help of the resource materials, the students with visual impairment were able to study more effectively.

AUDIO BOOKS AND ENGLISH LANGUAGE LEARNERS

The amount of time spent in reading has had a positive impact on the cognitive development and academic success of school-aged children and adolescents. (Moore & Cahill, 2016). Studies also indicated that the audio books have helped improve academic performances. According Montgomery (2009), audiobooks can improve reading and academic performance for both English Language Learners (ELLs) and Native English Speakers (NES). This research was significant because it indicated that audio books helped the middle school children improve reading comprehension levels who were reading below grade-level. Audiobooks have a distinct place in most public and school libraries, because of its digital feature has gained popularity among children. Moreover, audiobooks not only benefit readers who have difficulty in reading but also bring families together with early literacy. (Burkey, 2013).

Although critics question if listening to an audiobook can serve as a legitimate form of reading (Moore & Cahill, 2016), but audio books have established history in benefiting children through children's literature and literacy education. Further, Diergarten & Nieding (2015) provided evidence when watching movies and listening to audiobooks, children from the age of 5 were able to build emotional inferences.

Neuman (2005) also indicated that children take great pleasure in listening to stories because the child can follow along as the narrator reads. Children enjoy these audio books because of its interesting sound effects and music. Besides enjoyment, he confirms that the audiobooks help children develop a sense of structure and an understanding of language.

From the review of the above literature, it was clear that audio books have helped children with visual impairment and English Language Learners. Other studies indicated the importance of collaboration in the learning process among children. However, there were limited studies found where pre and in-service teachers through collaboration created audio books to benefit children's learning.

METHODOLOGY

The purpose of this case study was to examine how collaboration helped the teachers in creating audio books for the children with disability, especially for children with visual impairment living abroad.

SAMPLE

There were six students enrolled in a graduate Masters' degree program in Early Childhood Education. The students on the first day of class in their syllabus received the assignment: "Creating Audio Book" which carried 10% of the total grade. As per the syllabus the assignment was as follows: "You have to choose a children's book or can create your own book on any topic. Then record your own voice. Please make sure you speak clearly and slowly. This audio book will be sent via email to the children living abroad who are visually impaired. Please make sure that the audio book is not too long so that it could be sent via email. This is an Academic Service-Learning component and is required of all students". Although the assignment was mandatory, the students had the choice of any book selection. They could either make their own book or read a published book. The initial reaction of the students was very positive.

SETTING

The audio books were practiced in the classroom of the university. After receiving feedback from their peers and the instructor, the students recorded the audio books at home. Later on, the finished recorded audio books were sent via email to the visually impaired children in India. Through this virtual mode, learning spoken English through audio books was the specific purpose and the scope of this case study. The Academic Service-Learning experience of creating audio books for children with visual impairment that are living abroad was an engaging assignment for the students. The goal of this assignment was to record clear and pleasant audio books for children who are visually impaired.

PROCEDURE

Right at the beginning of the semester, in the very first class, the instructor who is also the researcher introduced the assignments to the students and told them to bring a couple of children's books or create your own book and that they will make audio books. The researcher told the students that children were visually impaired so that the students recognized that they have to select the book very carefully. They looked at each other's books and the instructor asked them to vote which book out of the two books they brought should be selected and why. The in-class assignment for the day was to read a couple of pages of the book and practice in class to record students' voice using the voice memo feature on their cell phones. The students selected a quiet area to read a couple of pages and recorded on their cell phones. They were asked to select a partner and share the audio recording of the two pages by listening from their cell phones. The students used the attached rubric to give constructive feedback to their colleagues. It was very evident that the students were engaged in the assignment and wanted feedback from their peers. The students gave constructive feedback to each other as a means of peer review. Most of the feedback was positive and some were for improvement. One student stated that the noise of turning pages of the book was disturbing. The other student said the voice should be modulated appropriately. With peer review, students were able to work toward perfecting their audios with constructive feedback and suggestions.

The instructor told the students to introduce each audio book by stating what the book was about. Then after reading the entire book, the instructor asked the students to end with a couple of thought-provoking discussion questions. After the formation of the questions, it was time to read the entire book and record it. In the following class, the students had to share their audio books with their peers. This time it was 3 students in a group. The researcher wanted to find out if hearing the same book at the same time would result in similar or different feedback between the two groups of audience. One student suggested

that some music should be incorporated at the background. The other student suggested animal sounds after each animal in the book “Polar bear, Polar bear what did you see?”

DESIGN OF THE STUDY AND DATA ANALYSIS

A case study approach with six teachers was used as the research method. The researcher collected data through observation during the class and kept a record in a journal, interviewed the participants and asked for the copy of the reflection report from the participants at the end of the class. The researcher contacted the Institutional Review Board and received the approval. The researcher contacted each of the students after the end of the semester and obtained written consent from the participants. The author documented the interaction between the peers, quality of constructive feedback and also kept a record of the comments made by the instructor. All data was analyzed qualitatively.

To analyze qualitatively, few themes emerged from the reflection reports by the students, interviews with the students and the author’s observation was kept as field notes. At first, the author generated a coding system to look at how the students worked together collaboratively to produce the audio books and also aimed at focusing on the learning outcome of the students. Later, the author re-read the reflection reports and the observation notes and generated more coding. The author realized that the students encountered many technical hardships, but they solved through collaborating with their group members. As a result, “Technical problems and solutions through group collaboration” became another common theme. Reflecting again from their journal entries, the students shared their experiences which helped them grow better as teachers and they shared their feelings towards those children who they have never seen. The students felt it was their responsibility as a teacher to create equity by creating the audio books for all children with or without disabilities. Therefore, the last theme that emerged was “Sharing experience and developing empathy”.

FINDINGS

This qualitative study was designed to understand how collaboration helped the teachers in creating audio books for the children with disability, especially for children with visual impairment living abroad. From the qualitative data analysis, the following four themes emerged from the data from 1) understanding the collaborative approach in receiving feedback from partners in book selection, 2) students’ learning outcomes, 3) technical problems and solutions through group collaboration, and 4) sharing experience and developing empathy. The following section discusses each theme accordingly.

A COLLABORATIVE APPROACH IN RECEIVING FEEDBACK FROM PARTNERS IN BOOK SELECTION

At the start of the process, the students were supposed to bring a couple of children’s books of their choice to class. Verbally, they had to create a rationale about the appropriateness of the books for the audience. Then, the students were supposed to consult with their partner and decide which book they were going to select. Since the students knew that the audience will be learning English from their narration, they understood that they had to speak slowly, softly, and clearly. The choice of book also made them realize that these children were from a different culture and not everything we find here as commonplace were available in India. Therefore, this was an enlightening experience for the students with regard to culture. Student A reported about selecting the following book: “The children’s book I chose for this assignment was, *Corduroy* written by Don Freeman. The writing is very descriptive which makes it easier to create illustrations in your mind. The story teaches valuable life lessons of the importance of friendship, courage, and hope”.

Further she commented, “I thought class time spent talking about it, and it was really helpful for I learned a lot”.

Student B selected another story and had to do a similar exercise. Here is an excerpt from her report: “I decided to choose the book *Goodnight Moon* by Margaret Wise Brown. Goodnight Moon was about settling down for bed at night and making sure to say goodnight to everyone and everything. I decided to pick *Goodnight Moon*, because it was short and easy to understand. I also liked that it’s a calming book that anybody can enjoy. Even though these children are visually impaired, they are able to use their imaginations, and picture the words in the book while they’re listening to it. With all this feedback, it was helping us to prepare ourselves for the final audiobook.” On the contrary, Student C reported being nervous about the process “When presented with this assignment, I was very nervous, but I figured this would be a good start. I have always wanted to record books using my voice: This assignment was definitely a sign for me to do something that I have never done before”. “I decided to read the book, “Polar bear, Polar Bear what do you hear” by Eric Carle. I thought it would be a good book to record for the children in India who are blind. I also figured that the sounds in the book would add a nice touch to the audiobook and they would enjoy it more. After I recorded my book in class, one of my classmates and I partnered up and listened to each other’s recording. My partner and I liked how I sounded, and I enjoyed her recording as well.”

Lastly, Student D mentioned her rationale as follows: “When being given the task to find an appropriate book to read, I had immediately gravitated to “Little Cloud” by Eric Carle. The book is imaginative, expressive, and fun. Children are able to create activities based on the idea, talk about shapes and weather, and most importantly learn about the ever-changing state of the clouds. When my other classmates and I introduced the book, it was a bittersweet moment. It was heartwarming to see the different kinds of books that are geared towards children, and some of those would accommodate the visually impaired children. It was hard to accept that these children will have a harder time grasping the context of other books, not only from their lack of visual cues but the cultural wall between what our students have experienced and what they have or have not experienced. All of us had a long list of concepts, words, animals, or objects that the students would need guidance to understand”.

STUDENTS’ LEARNING OUTCOME: STUDENTS FELT REWARDED AND HAD POSITIVE EXPERIENCE THROUGH COLLABORATIVE REINFORCEMENT

From the interviews, all the students mentioned that this assignment was indeed a great learning experience. They learned how to modulate their voices to make it pleasant to the audience especially because they are visually impaired. They also learned that they have to speak slowly, clearly and pause at appropriate places as the audience are from a different culture and English is a foreign language for them. They further stated that this was a rewarding experience as they felt happy and positive after the creation of the audio books. Moreover, they all stated that they would like to create more audio books like this. The reflection from Student B stated, “I thought the process of making the audiobook was really fun and exciting. After I was done with the final version, I was very pleased with what I had just created. It made me feel really good about myself, knowing that I was able to put this all together”. Similarly, Student C reported, “My friends loved it and they all said they really enjoyed it and that my voice was very calming. It made me very happy to hear their feedback because all my hard work paid off. I even sent it to my friend to read the book to my godson”. Another student mentioned, “This assignment was so much fun, and I hope I am given the opportunity to do it again. I love that it is going to benefit children and help them learn English. I enjoyed collaboratively working on our audio books and I feel good to help others, especially when it comes to children”.

TECHNICAL PROBLEMS AND SOLUTIONS THROUGH GROUP COLLABORATION

Although the students were all eager to learn that they are going to create audio story books for English language learners and visually impaired children in India, they all agreed that this was not a simple task. As one student mentioned, “Little did I know; this was going to be a long process along the way”. Although rewarding at the end, this was challenging and time consuming. The students really wanted to make it perfect. As a result, they took a lot of effort and time to create the books. The urge came from the students themselves. Since the maximum grade for this project was only 10 points, it was obvious that the students worked hard because they wanted the story books to be excellent. The collaborative approach of getting and giving feedback was absolutely essential. Without collaboration, this book project would not have been possible. One student commented: “To create this audio book, I used the app provided by Apple iPhone named, *Voice Memos*. Originally, I planned to read the whole story, introduction, and conclusion in one try. I practiced reading the story for about a half hour before I started to record. When I began recording, I noticed you could hear the pages turning while I was reading. Instead of actually turning the pages, I decided to type out the entire story on my computer and she suggested her classmates to do the same. To make my story more interesting and captivating to listen to, my partner suggested to include various background music as I read. I felt like background music really worked well, it masked out any unwanted outside noise and made the book more enjoyable. I thought it was helpful that we were able to share the audiobooks with the class, and I liked that we were able to listen to each other’s and were able to give, as well as receive feedback from one another, including feedback from our professor. All of this feedback that I received really helped me to focus on the audiobook and helped me to make the best audiobook that I could possibly make. After receiving all of the feedback from my peers and the Professor, I was confident in doing my final version of *Goodnight Moon*”. It seemed that the motivation of doing this digital story telling was intrinsic. Another Student C reported how hard she tried to create the project. “During that week, I practiced my introduction and conclusion several times because I wanted it to be perfect. I shared my introduction and conclusion with my classmates, and everyone liked it”. The students took up a challenge by themselves. The instructor was there to positively encourage them and give them the support. Further, a student stated, “After I recorded my book in class, one of my classmates and I partnered up and listened to each other’s recording. My partner and I liked how I sounded, and I enjoyed her recording as well. It was a struggle to setup my iPhone to record, my iPad to play the background music and pushing the sound buttons from the actual book. I was having trouble and would hear the background noise”. As she stated her hardships in class, one of the students suggested, “typing up the words of the story so that I wouldn’t have to worry about turning the pages and it was so much easier”. Clearly the collaborative aspect helped each other throughout the process. Further she stated, “during class we had to share our recordings and it was suggested that I use actual animal sound. I bought a CD on animal sound and I had to record each animal sound in the same order as they appeared in book. I think I recorded this whole thing about 25-30 times before it was just perfect. I really didn’t think such a simple assignment would take so much time, but I knew I had to make it perfect and make sure my voice was clear, smooth and words were being pronounced correctly. So, in reality, creating audio books does take a lot of time and patience”.

In the same line, Student D reported: “The process in which I was making my audiobook was more complex, time-consuming thought evoking and rewarding. I wanted to make the book more interesting with sounds to help the children “feel” the story. The feeling they get when it is windy, or the excitement they feel when they are at a carnival, or the feeling

of jumping around like a rabbit. The sounds would make the story a new experience. If I messed up on a word, or the sound was not on time or too low, I would have to begin again, or at least find a way to record over seamlessly. My classmates' feedback helped me to get the task much more efficiently because we were all trying to do the same project with our individual book and each of us contributed their experience and we all learned from each other." Through collaborative effort the students helped each other to improve their diction, articulation, speech, public speaking, pronunciation, and inflection.

SHARING EXPERIENCE AND DEVELOPING EMPATHY

The students realized how difficult it is for a child to have visual impairment. As Student A reports: "The empathy that I felt made me not only a caring teacher but also a better person. After completing this assignment, I was able to think about how hard it must be to be visually impaired. These children must learn a completely different way because they are not able to rely on their sight to obtain information. By helping children who are visually impaired, the opportunity allows them to be exposed to stories, expand their vocabulary, learn a new language, expand their learning comprehension skills, and gives them something to look forward to. This project can give children the feeling like they are important and capable of learning just like other children".

She further stated that she felt proud of her university's mission: "Our university's Vincentian mission is to provide community service to help people lacking economic, physical, or social advantages. The mission seeks to, 'Foster a world view and to further efforts toward global harmony and development by creating an atmosphere in which all may imbibe and embody the spirit of compassionate concern for others so characteristic of Saint Vincent'. She also commented: "The service opportunity I was able to complete, helps provide visually impaired students with an opportunity to learn in an easy and enjoyable way. Even though they are visually impaired, they still need to learn new words in a different way other than reading". During the interview, she said, "I was very happy to have had the opportunity to make an audio book for these children. I had a fun time doing so and would love to create another one again. Most importantly, I had my classmates help me throughout the process leading to the success of this project". I observed that the students felt proud of their university's mission and were happy to address the mission with their creative story telling books. They were excited that their creation will help children abroad especially the children with visual impairments. They felt rewarded as they could make a difference in the lives of the vulnerable children.

In the same token, another student commented, "It also made me feel even better knowing the outcome of the audiobook, and who would be receiving it. Knowing that I did this assignment for visually impaired children made me really happy, because all children deserve to enjoy books, whether they are able to read them by themselves, or having them read. I enjoyed this assignment very much, and I am looking forward to making more audiobooks in the future".

Student D also felt very empathetic. She stated: "After this experience, I have a deeper connection and respect for these children. It is easy to go about my daily life, being privileged with the sense of sight. It evokes a new need to reach out and help where I can in different areas of the world and in different areas of needs and contribute their knowledge to the less privileged children".

DISCUSSIONS

The purpose of this case study was to examine how collaboration helped teachers create audio books for the children who are visually impaired across the world. Audio books are an assistive technologies that is geared towards helping children who are visually impaired

as stated in Csapó, Wersényi, Nagy & Stockman (2015) and Bhowmick & Hazarika's (2017) research. This study echoes the same as the study by Cho and Lim (2017) that problem solving through collaboration was more effective in facilitating and maintaining intrinsic motivation than teacher-directed instruction. This study also indicated that students were intrinsically motivated when they collaborated on the process of creating audio books. This study is in the same line with Kahai, Jestire, & Rui (2013) that the teachers who must create appropriate social and instructional interventions in order to promote effective learning. This study resonates with Fansury, Lutfin, & Arsyad (2019); Ozgur, & Kiray (2007) and Singhal, Singhal, Bhatnagar, & Malhotra (2019) as audio books are an effective teaching medium. Collaborative learning supports teachers in building the thought process and the productivity for the benefit of the students. Through collaborative learning and receiving feedback from their peers, the students who are the pre- and in-service teachers of young children supported each other in building the thought process and created the audio books which ultimately will benefit the children.

Although rewarding at the end, this was challenging and time consuming. The students invested hours of work because they felt this was their responsibility as a teacher to make a global impact. Because of the want to perfect these creations, students were intrinsically motivated to make the audio books perfect. They valued the assignment and went out of their way to create something that they can be proud of as an educator. The collaborative approach of getting and giving feedback was absolutely essential and they helped each other throughout the process. This process could not have been completed without everyone's collaborating on this project.

Since the children are visually impaired, the students took upon the responsibility to improve educational services with audio books for the children. Studies by Sanchez & Saenz (2006) have also highlighted that the use of technology can help learners to develop effective skills such as motivation and self-esteem and also solve problems.

In the process of creating the audio books, the students developed empathy realizing the hardships of the children with visual impairment. After working collaboratively and creating these audio books the students realized how hard it must be to be visually impaired. They understood that because of the visual impairment, these children's learning experience was completely different. This was indeed a rewarding experience for the students. The students felt proud of their university's mission and were happy to address the mission with their creative story telling books. They realized that their creation will help children abroad especially the children with visual impairments. They felt rewarded as they could contribute their knowledge to the less privileged children.

Moore & Cahill's (2016) study indicated that time spent reading has a positive impact on the cognitive development and academic success of school-aged English Language Learners. Hence, these audio books will help the children from a different culture to hear the books again and again and will have a positive impact on cognitive development.

Further, studies also indicated that the audio books help improve academic performances. This study would hopefully resonate with the study by Montgomery (2009) who stated that audio books can improve reading and academic performance for English Language Learners (ELLs) and for native English speakers (NES). Similar to Burkey (2013) these audiobooks hopefully will help children with spoken English.

Similar to findings by Neuman (2005) these audiobooks will hopefully not only bring happiness but also would help children gain an understanding of the language. With the addition of sound effects and music to the background, the children will take great pleasure in listening to the stories.

The students had to work hard to create these books with background music. They had to speak slowly with modulated voice for English language learners abroad. Through collaborative approach, the students helped each other out and based on the feedback of

the peers revised the books for the children who are trying to learn English by listening repetitively. Further, the students knew that the audience will be learning English from their narration, so they had to speak slowly, softly and clearly. Indeed, the students felt responsible as teachers. The choice of the book also made them realize that these children were from a different culture and not everything we find here as commonplace were available in India. Therefore, this was enlightening experience for the students with regard to culture.

The students had brainstormed different ideas with different types of audio books. There were books exhibiting different contents, for example some were about nature, whereas other books were of culture, animals, sounds, music and family. There were challenges from start to finish. For example, the students had to think about the audience. The books on color were not appropriate for an audience who are visually impaired. Further, books having nonsensical words weren't appropriate for an audience who are trying to learn English. Therefore, the teachers had to use their judgement about the appropriateness of the book.

Without collaboration from classmates, this project would not been efficiently completed. The collaboration made student feel as a community. Everyone wanted to help each other, and everyone took all the constructive feedback and improved their work. At the end of the project, the audio books were very creative and were less than five minutes long, so the instructor was able to send the audio books through email.

The limitation of the study was time restriction and the difficult the students faced finding animal sounds. Because of these hurdles, the students had to buy CDs with their desired audio effects. The students in the collaborative process gave constructive feedback to each other with rationale. Further, the length of the book was another factor to consider as it had to be sent by email. As a result, it was decided that approximately 5 minutes could be the time frame of the audio book. Since the students know that repetition is a good idea for students learning a language, they selected a book that has repetition. Future studies should indicate how these audio books helped the children with visual impairment and from a different culture in their learning process especially with respect to learning English.

CONCLUSION

The collaborative nature of the assignment was important as it helped the students solve problems. It helped elevate the ideas and it took them to the next level of thinking. Even though this assignment was new for the students, through collaborative effort, they helped each other to improve their diction, articulation, speech, public speaking, pronunciation, and inflection. The students were very creative and innovative. This assignment helped them build read-aloud skills and instilled confidence as a teacher. This study is in the same line with Kahai, Jestire, & Rui (2013) that the teachers who have to create appropriate social and instructional interventions in order to promote effective learning.

This collaborative assignment helped the students develop the ability to accept constructive criticism. They were validating someone's truth, yet respecting other's ideas. They were honoring developmentally appropriate practice for early childhood as they tried to record real sounds.

There were a few strategies that deepened collaboration. Collaboration was experienced when students sorted out appropriateness of book choice and through peer reviewing. students shared the excitement. The students discussed with each other throughout the process. They were together thinking the audience are children in another country with disabilities, sharing expertise in somewhere they have never even been, but their voices will be there. Excitement radiated throughout the classroom with energy and passion! They felt that they could implement the same book and make similar books in their classrooms,

especially for their students with limited reading and writing ability. Students were able to grow together in learning how to create and establish a culturally responsive classroom. With this project they were able to address auditory learning styles and improve the quality of audio books through feedback. As a result, students not only created a successful project, but also collaborated to become better teachers.

Finally, after the completion of the project the students were comfortable at a new task as a creative teacher. They were happy to realize that children can listen to the stories repeatedly. These audio books would introduce children to early literacy. The challenges outweighed the reward. The overall experience was rewarding and self-fulfilling. They felt a sense of accomplishment. Indeed, with the collaborative approach creating audio story books for children with disabilities led to language learning virtually in a melodious way. With the integration of music in the background made the audio books sound sweet and pleasant to listen. The students did a great job with warmth, love and care. The project could not have been so enriched without collaboration from the classmates. The collaboration made them feel as a community. Everyone wanted to help each other, and everyone took all the constructive feedback very sportingly. The academic service-learning experience of creating audio books for children with visual impairment, living abroad was an engaging assignment for the students. The potential application of this project was to solve the problem of learning spoken English through a virtual platform for children who were visually impaired.

The implications of this study, in the field of education, can develop into a virtual learning platform that not only helps children who have visually impairments, but also for young children who have limited reading capability. With sound effects and musical background, the audio books became aesthetically pleasant and therefore, could draw attention to all children regardless of a child's disability. It implies that if teachers put their minds together, with their knowledge they can create audio books that will benefit children in their learning process. Teacher education programs could thus be enriched with similar projects, and educators could design these kind of innovative audio books for special needs students. In future, I would like teachers to create their own books on the concepts that are difficult for students to understand. This study could be used as a model within teacher education programs as a means of emphasizing collaboration, feedback, and higher-level thinking. This will cause the build on teacher identity, for the betterment of students, when creating lifechanging learning tools.

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