

Two Culturally-Situated Instructional Design Cases for Beginner English Language Learning in Haiti

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Short description (maximum of 72 words)

Captured by the dire need to improve the quality of elementary-level education in a developing country, this paper offers two case studies that reveal how two graduate-level students participated in a project based learning (PBL) opportunity offered in an Instructional Design and Technology class. This paper highlights the practical application of theories and strategies to engage learners as we designed and developed digital interactives - ABC lesson and Color crew for orphaned children.

Abstract

“Developing proficiency and fluency with tools of technology is one of the essential skills and important frameworks to aid learners to become literate in the twenty-first century.” (National Council of Teachers of English, 2013). This paper shows the process and design of two accessible, ESOL friendly digital interactives titled ABC Lessons and Color Crew. Each lesson is specifically designed to improve literacy for elementary level in Haiti using culturally-situated personas, objects, and child-centered approaches to design relatable and engaging lessons. The target audience for these interactives is underserved children in Haiti, and the contexts used were carefully selected to enhance inclusion. In this paper, two instructional design masters candidates describe their experience designing English as Second Language instructional interactives for underserved children in Haiti.

The opportunity for this project based learning (PBL) activity is to design, develop, and deliver interactive instruction (interactives) on digital devices for underserved Haitian children was presented in an Instructional Design and Technology (IDT) class. We volunteered to participate in this real-world activity to be included in the University of Tampa Research Innovation and Scholarly Excellence (RISE) grant intended to deliver a compilation of several interactives to underserved children on digital devices. Our goal was to begin by researching and analyzing our target audience, learning theories and instructional design strategies to be able to design relatable instruction for the children such as using personas contextualized for the children in the Haitian environment.

Literature Review

Analyzing the Target Audience

The *Institut Haitien de Statistique et d'Informatique (IHSI)* said school enrollment has gone from 40.1% in 1990 to 86.7% in 2002 representing 2.1 million children (Wikipedia, 2020). Even though it shows a significant improvement from earlier years, the education sector in Haiti lacks the quality and access necessary for sustained social and economic development. According to Echevin (2017), fewer than 60% of first graders will reach 6th grade, fewer than two-third of them sit for the end of 6th grade examinations and, among those, only three-quarter pass the examination. Other possible causes of these poor results are the lack of teaching materials. With these existing challenges affecting the education sector, many children struggle to learn another language including the underserved. According to Luzincourt, K.(2010), the problem with the language of instruction in the early years of education is the outdated learning methodologies especially for the underserved children who do not have the financial ability to pay for private education.

Learning Theory and Instructional Design Strategies

Jean Piaget 4 levels of cognitive development focus on late preoperational (ages 5 to 7) and concrete operational (age 7 to 11) stages of development. Cherry, K. (2010). The preoperational stage is the emergence of language. At this stage, children learn through pretend play and still struggle with logic. While at the concrete operational stage, children tend to struggle with abstract and hypothetical concepts. The instructional design model used was Successive Approximation Model (SAM) which is a good fit for small agile projects that does not require a lot of complicated technology. (Herrholtz, K. 2020). With three (3) weeks to develop a sample of the interactive course to show to the Stakeholders in Haiti. The first step to complete the task was to revise the ESOL materials used in Haiti. The booklet used to teach English as a Second Language in public base education in Haiti was from 2008, it was out of date, and it had some significant grammar mistakes. With the support of ESOL Subject Matter Expecters, Stakeholders. Instructional Designers, and Project Manager it was possible to brainstorm and write learning objectives that meet our learners' needs. This basic approach was to discuss (analyze), prototype (design), test and develop.

Research also suggests that the following strategies improve effectiveness of ESL instruction (*Plass et al., 2020*).

- Using personas
- Incorporating instructions directly into gameplay of interactives (vs. being offered as an additional screen)
- Collaborating and reading aloud improves the construct of the language.
- Read-aloud activities
- Glossaries for vocabulary
- Hints and cheats

Applied Research

Design

The learning theory used in this project was based upon Piaget's 4 Stages of Cognitive Development.

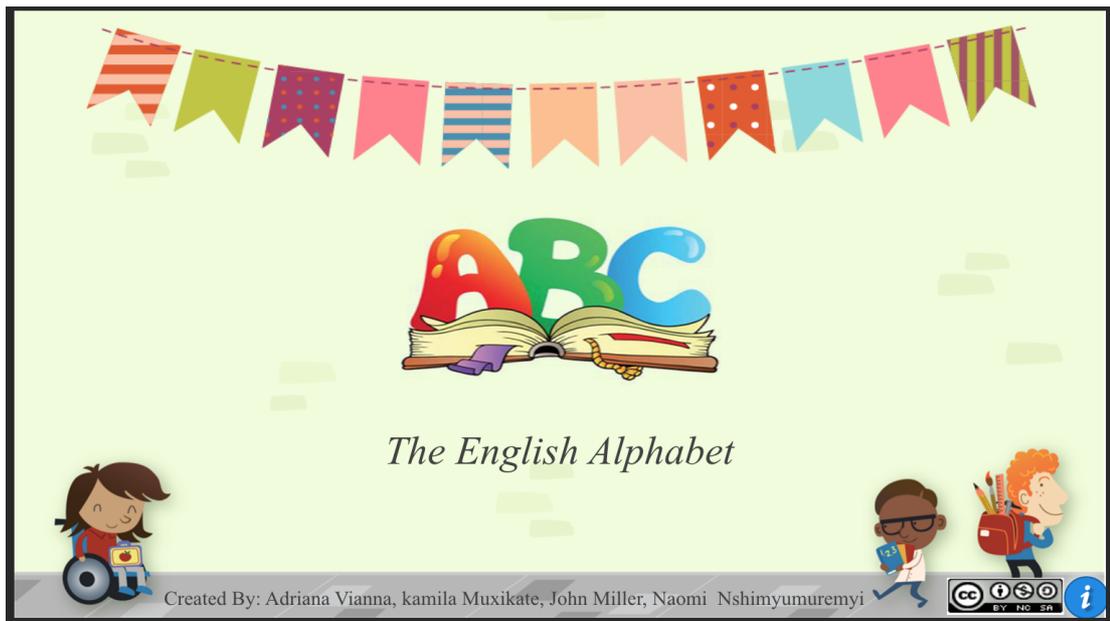
The late preoperational (ages 5 to 7) was used to help the learners understand the world through language and mental images. For example, the ABC Lesson demonstrates picture and the child voice actor repeats the words three (3) times for repetition which is fundamental for children on the preoperational stage of development. The lesson Color Crew was designed using objects and persona that is familiar to the late preoperational learners and concrete operational (age 7 to 11) stages of development. This is with a bid to make it logical while also presenting primary and secondary colors in different categories. And a supporting slide for learners to see the colors of objects either peculiar to Haiti or will interest their age.

Based on the evaluation of the quality assurance mean results of both lessons ranging from 2 (Satisfactory) to 3 (Very satisfactory) on a 3-point scale, the Instructional designers considered relevant learning theory and instructional design model in designing lessons that can be effective for the elementary school age children and introduce English as a Second Language. While also considering accessibility using closed captions, cultural context using familiar objects in their environment and persona with a name that is common in Haiti. All of this was achievable with a focus on the target audience with an aim to make them comfortable to approach each lesson with enthusiasm while learning. There was a virtual walkthrough with the stakeholders on the final version of the lessons and it was received with excitement.

Case 1. The objective of ABC Lesson was to provide a foundation with an image and sound with the correct pronunciation to form words using the sound of each alphabet letter which is fundamental to teach a new language to children. The first step was to select pictures to which the children could relate. (See Figure 1.)

Figure 1.

Home screen of ABC Lesson



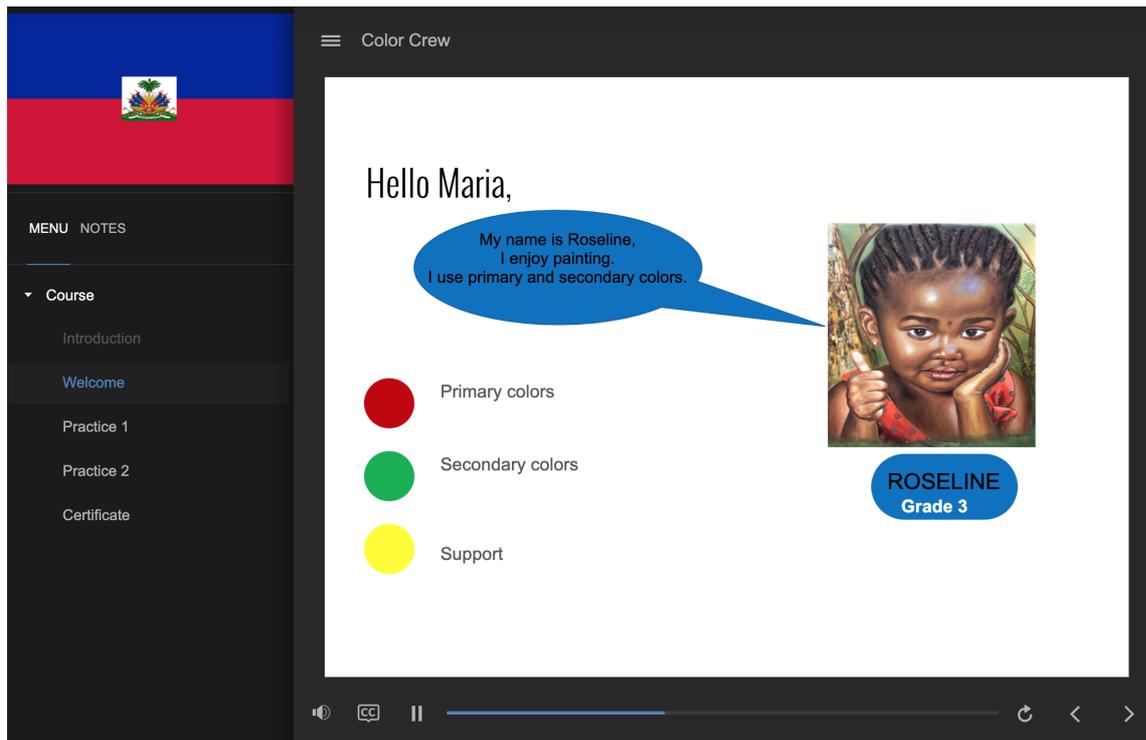
To capture the attention of the learner, voice actors volunteered and were selected to be the most relatable to the children. First, a six-year-old girl was selected as she demonstrated an enthusiastic child-like voice; she was also fascinated with the possibility of helping Haitian children to speak English. Another voice actor was selected to repeat the alphabet sounds. Each provided the learners with two different consistent roles. One being the adult voice to offer instructions while the child motivated the learner to repeat pronouncing the alphabet letters.

Furthermore, the lesson has five quizzes learners can take to show that they can connect some alphabets to their respective sounds and words. This practice gives base to ESL learners to start speaking the language. Finally, after completing all the steps of this lesson , learners will receive a printable job-well-done badge.

Case 2. The second interactive Color Crew has a cover screen that allows a learner to type in their name for personalized use, with a child actor voice to motivate the learner during the introduction of the lesson. Design decisions included using the persona with a common Haitian girl’s name and resemblance. (See Figure 2.). All features are fully functional on both computer and mobile devices.

Figure 2.

Color Crew Lesson Screen Reflecting Contextualization of Child Persona



In the beginning of the lesson, she introduces the colors in two main categories of primary and secondary colors. Each category of color takes a specific shape, to introduce the concept of shapes. Alongside, while each color is pronounced through interactivity, the triggered motion path allows each color to fall from a height and drop into a container commonly used in Haitian villages and mountain houses. Additional slide was added to help the learner relate colors to objects commonly seen in Haiti using interactive markers to images. A hover function on each marker reveals the name and sound of each object. For the practice section, it was deliberately designed to provide feedback with no score rating in order to encourage the user to try again after a failed attempt, without feeling intimidated. After all, the overall goal of any instruction is learning. Finally, the user gets a printable personalized child-friendly certificate.

Formative Evaluation

Qualitative observations were administered to masters candidates (19) to test the design aspects of the digital interactives.

Observations included lack of emotional reaction despite the colorful pictures and more practice was needed.

Revisions made included having a child sound out the alphabet letters and at least two pictures were added to each alphabet letter to help learners visualize and recognize an object or animal's name using their first letter.

Beta-Testing

After we completed the interactives, a Quality Assurance Checklist instrument was used to test the quality of the game design and content. Subject matter experts including representatives from the organization the interactives were being delivered to and university educators completed the testing.

Table 1 reflects the results on a 3 point scale whereby (1) was *unsatisfactory*, (2) was *satisfactory*, and (3) was *excellent*

Table 1.

Data Result of Quality Assurance Checklist of Content (c) and Design (d) for ABC Lesson

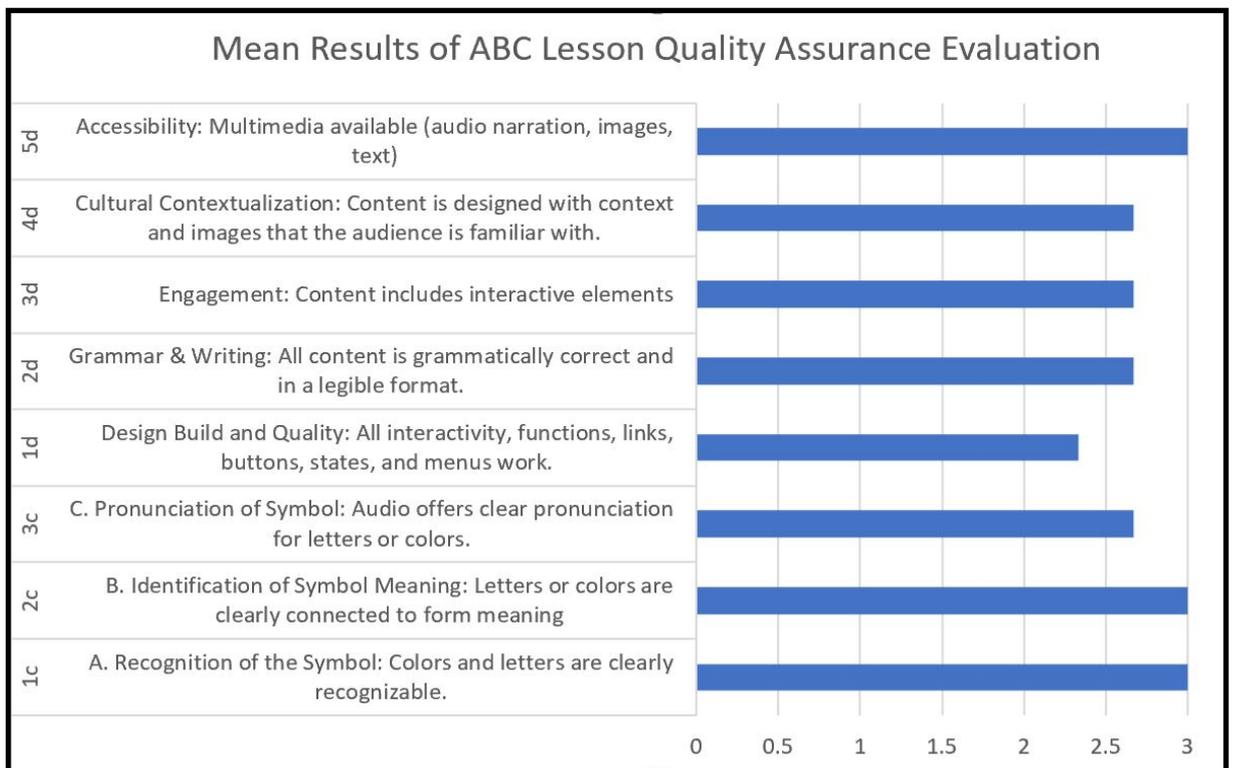
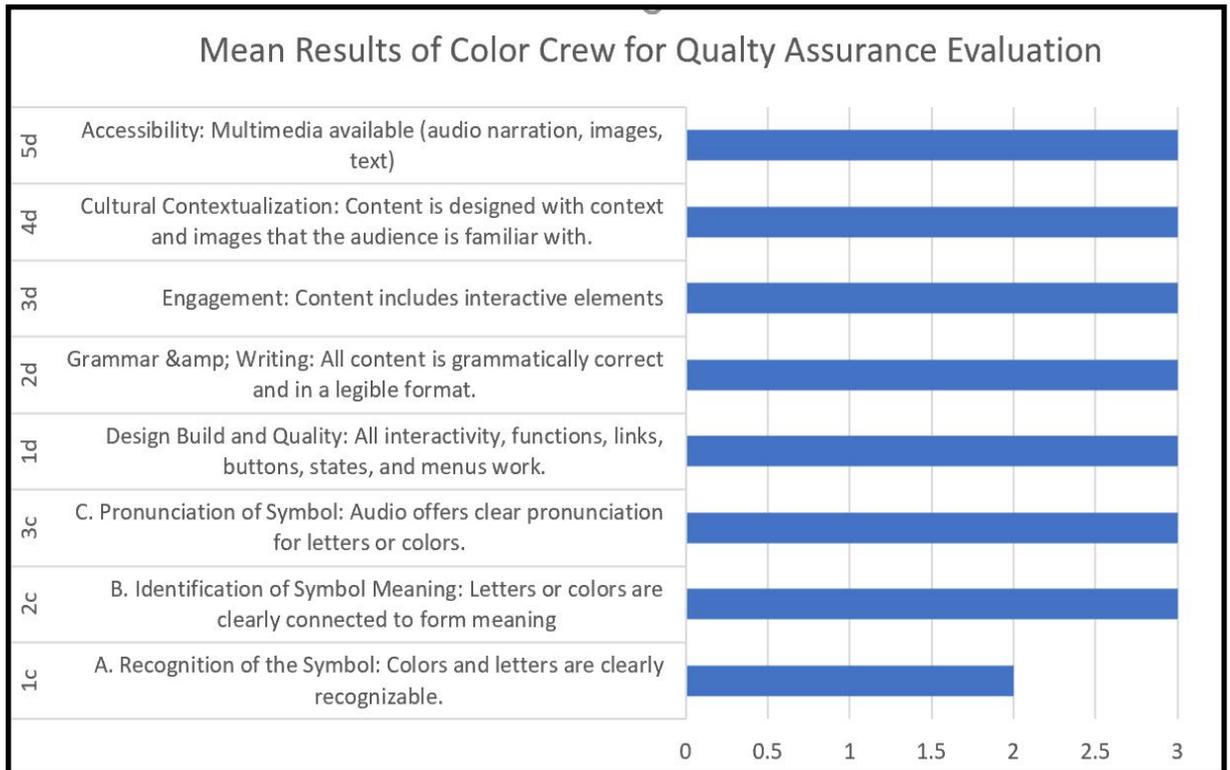


Table 2.



Both lessons (as shown in the tables above) were scored satisfactory to excellent in all the categories. And based on the evaluation result, the lessons were reviewed and simplified for clarity, ease of use, and navigation.

Discussion

Formative evaluation testing provided critical feedback to the success of the lesson. Lessons learned included using a child’s voice to enable the target audience to easily connect to the instruction. Two pictures for each alphabet letter were also necessary to help the learners visualize, recognize, and apply them to an object or animal’s name accordingly.

Conclusion

Since the education offered to elementary school age children in Haiti is not currently enough to provide support for children learning a second language, and the educational materials are usually out of date, we believe the efforts from this voluntary work to support the RISE project initiative will bring some hope to promote ESOL and motivate children to learn a second language.

Opportunity - The University of Tampa RISE grant team is currently planning to download the projects on about 20 tablets that were donated and would be sent through Christian Action and Relief for Haiti (CARHA). The interactives are open to use for educational purposes only and can be downloaded on personal electronic devices such as mobile phones, laptops, or tablets. Educators can assign the lessons for learners to complete at home as homework or learners can interact with the lessons for fun.

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