A Study on the Development of Multimedia Contents for Preservice Teacher Education Focused on Early Childhood Language Arts Courses

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Abstract

A multimedia instruction that integrates different types of media is a way to maximize learning effectiveness, and three-dimensional lessons through a variety of multimedia will be able to offer a more realistic education as an innovative alternative to one-sided, lecture-oriented instruction. The growth of computer engineering has an extremely positive effect on early childhood education as well as prospective teacher education for young children. In order to meet the demands of the times and keep up with the changing educational environment, this study intends to develop multimedia contents for early childhood language arts courses, to suggest how it could be developed, and finally suggest its practical use.

1. The need for the development of multimedia contents

The advance of computer technology plays an instrumental role in impacting not only preservice teacher education in the early childhood education department but early childhood education as well. Universities need to develop teaching and learning methods utilizing multimedia to its fullest as a means to replace traditional face-to-face education. The purpose of this study is, therefore, to develop multimedia content for early childhood language arts courses to keep up with the changing educational environment. By early childhood, nearly 90 percent of all language skills are developed, therefore it is a critical period for language development. Consequently, language education is one of the primary early childhood education areas. So, it is very meaningful to develop multimedia contents for early childhood language arts courses which educators in the field of Early Childhood education and parents would be interested in. The educational benefits of multimedia contents can be listed as below: Multimedia contents can raise learner achievement. The contents developed in this study were designed to teach theories through text and movies, pictures, sound and animation and were employed for practical lessons. It also provides both the theory and practical knowledge of early childhood language arts, empowering learners to learn in an easier and more motivated manner through both the internet or with a CD-ROM title, without being restricted by time and space.

2. Multimedia Contents Development for early childhood language arts courses

Out of multimedia contents for early childhood language art courses, a listening chapter can be presented as follows: The listening chapter consists of two portions, as opposed to a single text-centered one, a document portion and lecture-type movie portion. The former includes text about the entire course, and the latter gives a summarized explanation about the same. In the second part, theoretical explanations are provided through movies, and sound, images, animation are all put to use for additional explanation in such a way to help learners fully comprehend the lecture. The following software programs were utilized for the contents:

Authoring tools: Director, Namo Webeditor, Flash, etc.
Image production: Photoshop, Illustrate, 3DCool, etc.
Sound and image production: Real Video, Premiere, etc.
Others: Word processor, HTML
Operating system: Hangul, Windows98/NT

The listening chapter is composed of six sections. The first section describes the concept of listening. The second one offers the general principles of listening education. The third section explains listening instruction strategies. The fourth section provides an activity to listen to fairy tales. The fifth section includes listening activity materials, and the sixth discusses the practical listening activities. Every section is made up of text and movies that give an explanation about what learners should learn. When additional explanation is required, pictures, animation, images and additional movies are utilized to facilitate learning effectiveness and help the learners comprehend the lesson better. Each section has a subscreen, which consists of movies and documents. The documents provide text about each section, and the movie portion offers lecture-type movies and additional explanation for each sector. The main screen includes the Table of Contents as seen in Figure 1.

![Figure 1](image1.png)

Once the main screen has popped up, if the learner clicks the “Listening Chapter”, the chapter’s Table of contents will appear. See Figure 2.

![Figure 2](image2.png)

By clicking on the forth section, “Listening to Fairy Tales”, Figure 3 will pop up.

![Figure 3](image3.png)
On this screen, the learner can watch and listen to the lecturer’s explanation and instructions and click on the icons on the screen. By clicking various icons, they can have access to an orally narrated fairy tale (Figure 4), picture tales (Figure 5) or puppet tales (Figure 6). Through this, they can learn and enjoy various types of fairy tales, movies, sound, and animations that were utilized by learners in experiencing various methods to convey fairy tales.

If learners click on the “orally narrated fairy tales” icon in Figure 3, they can view “Little Cat’s Hiccough” as seen in Figure 4. The storyteller on the screen is a prospective teacher.

If learners click on one of the various “picture fairy tales” in Figure 5, they can view picturebook type fairy tales through animation and audio. All “picture fairy tales” were produced by students of the early childhood education department.

In Figure 3, if learners click on the “puppet tales” icon, they can view a puppet show, as seen in Figure 6.

If learners click on the fifth section—“listening activity materials” as in Figure 7, the movie of the lecturer appears. After listening to the lecture, if the learner clicks on the “listening activity materials” icons, they can view a photo of each material.

If learners click on the sixth section, they can listen to an explanation of a practical listening activity for use in a kindergarten classroom. After the explanation (Figure 8), the learner can view a realistic listening activity as seen in Figure 9.

3. Expected Results and Future Challenges

The above-mentioned type of multimedia contents for early childhood language art courses are expected to make the following contributions:

The use of multimedia for education could produce best results in both theory and practice, as an excellent alternative to traditional lessons. Secondly, if supplied on the Internet or on CD-ROM, it will offer relevant information or free learning opportunities, without being restricted by time and space. Finally, the adoption of an animation program could encourage students to be more interactive in class. The Web-based contents could be designed to further interaction between learners and instructors. This will provide higher motivation and learner-centered instruction to students. There are neither sufficient authentic guidelines for the development of multimedia contents [1], nor enough relevant theoretical studies. In the future, more research efforts are required to address such problems.

<References>

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