Interactive Learning through the Usage of Java Scripting

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Abstract

Technology has an essential part in the education and social growth for the youth of today. Children are increasingly devoted to video games, cd-roms, and the World Wide Web. Playing a game is the most common way for a child to develop mentally. Distinguishing colors and reading the color name is an important part of a child's development. With the use of Java Scripting a small program is designed for children to learn their colors and names. An object oriented program was designed and implemented using Java to interact with children to select a color and spell out its name. The program opens a window with the menus: File, Edit, and Let’s Play. The File menu allows the child to quit the game at any given time. The Edit menu allows a child to clear the background for a different random color. The Let’s Play menu allows a new game to start. As the Let’s Play menu is clicked the program displays four buttons with four random colors out of a total of six colors which are: red, orange, yellow, green, blue, and purple. The input of the program is a click on one of the four colored button. As the button is clicked, the background is changed to the color of the button and its name is spelled in big for the child to learn. The button colors will change randomly each time a new game is started.

Introduction

With the use of the personal computers in every classroom or home, technology becomes more “persuasive, powerful and empowering” through a child’s learning environment. Gaming combines words, pictures, sounds, animation and video into one. With the advancement of technology, young children are given a large variety of interactive learning. During the time children are in preschool, kindergarten, and even early primary classrooms “they gain intelligence, nonverbal skills, structural knowledge, long-term memory, manual dexterity, verbal skills, problem solving, abstraction, and conceptual skills with the use of a computer.” By the age of 5 and 6, children become young explorers at the computer and are ready to read words by sounding. These preschoolers are eager to learn by experiencing and performing.
Child’s Interaction

Working with the java script software, I was able to implement the kindergarten curriculum into a program that interacts with a child. The program allows the child to feel comfortable while making a selection from various options. Within one window, the child can choose to quit a game, start a game, or clear a color on their computer screen that was chosen previously. Giving the child a “choice will boost their confidence and self esteem” during the time of play. Having the chance to make small decisions gives the child a feeling of competent and in control. Once the Let’s Play menu is chosen, again the child is allowed to make a decision, on which color he/she wants to learn. Displayed within the window are four buttons with four random colors out of a total of six colors which are: red, orange, yellow, green, blue, and purple. Some color names are easier to spell or say for a child, and the child is able to choose which color they want to learn first with the click of a button.

For a child to learn their color and the color name, many kindergarten curriculums require that the child identifies and recognizes their colors. The input of the program is a click on one of the four colored buttons. As the button is clicked, the background is changed to the color of the button and its name is spelled in big for the child to learn. When a colored button is chosen, the learning begins. One click allows the child to see the color and at the same time see the color’s spelling. The child will be able to identify the beginning letter or ending letter of the word and the size of the word. When a child sees red, it will notice that it has 3 letters and begins with the letter r. The child should be able to recognize the color, which is spelled out to them, is the same as the colored background. Once a new colored button is chosen, the child should notice the change of the background color and the spelling of the color is different. Given time and the child’s concentration, he/or she will learn to associate the word, it’s spelling, and the color.

![Learn My Colors Game Console](image-url)
Figure 1. shows the Learn My Colors Game Console. It allows the child to choose to quit the game under the file menu, clear the background color with the edit menu, or start a new game with the Let’s Play Menu.

![Learn My Colors Game Console](image)

Figure 2. Choose a Color Game Console

Figure 2. shows the Choose a Color Game Console, allows the user to select a color that will be displayed and spelled out once a button is clicked.
Figure 3 shows the Choose a Color Game Console once a button is clicked. When a button of choice is clicked, the color will be displayed as the background and the color is spelled out in a message dialog box.

**Summary and Conclusion**

In summary, the objective of the java script program is to help children identify and recognize their colors. Playing a game is the most common way for a child to develop mentally. Distinguishing colors and reading the color name is a start of a child's development. The idea of the program is more than a child playing a game, it allows the child to make decisions, interact, observe and learn all at once. Technology has an essential part in the education and social growth for the youth of today. Using the java script programming is only one of many ways to interact with a child.
References


Biographical Information

ALLYSON L. WASHINGTON is currently seeking a B.S. degree in Computer and Electrical Engineering Technology at Prairie View A&M University, Tx. Her research interests include analytical graphics and satellite communication, engineering software development within education, and the advancement of modern day technology.

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