

Teaching Color Theory to Children with Three-Dimensional Computer Animation

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Abstract

An artfully designed 3-D computer generated video story was created to demonstrate the mixing of primary colors to obtain secondary colors. Two research questions were explored in this research: Do artfully designed 3-D computer generated video stories enhance learning or are such entertaining works a distraction from learning? And, do children attend to the content of artfully designed video or are they merely entertained? Results of this study showed that visualization technology and the use of 3-D graphics stories can be employed in the field of art education to increase a child's understanding and attention to color theory. These findings contribute to both theory regarding children's art education and provide evidence that 3-D computer animated video stories can be valuable teaching tools for young children.

Keywords

Computer Animation, 3D Computer Graphics

Video User-Scenario Approach for Information Appliances Design Collaboration for Multidisciplinary Teams

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Abstract

The purpose of this research is to propose a design approach for information appliances in the age of network computing. This paper focuses on a design method with video user-scenarios for design collaboration by various types of professionals. From the user-centered design approach, the collaboration of various types of professionals is important to design information appliances because of complex usage, tools, and systems. One of the difficulties of collaborations among various types of professionals is that it is not easy for them to communicate with each other because their backgrounds, the results of their work, and their technical terms are different. Modeling a user-scenario is one of the useful methods to share user information but it has several problems, such as the realism of the scenarios and the difficulties of making and updating them. Another problem for the user centered-design approach is that it is not easy for designers to understand user tasks, actions, and feelings from the users' viewpoints. For these reasons, the author has extended the user-scenario method to video-based user-scenarios created by a designer. The suggested method is that the designer acts out the user-scenario by him and makes a digital video of it. This recorded video will be used as a tool for communication and collaboration with various types of professionals. The video scenario can be utilized at any stage of the design process, such as identifying user tasks and requirements, creating and evaluating ideas, and making presentations. After proposing the design method, two sets of experiments were performed to evaluate the approach and the results showed that the proposed method helps the designers to design the information appliances. The method supports collaboration among various types of professionals and helps them understand from the user viewpoint.

Keywords

Design, Collaboration, User-scenario