Design Creativity Emerged by Multimedia Experience

Ji-Hye Lee

Education in Art Team, Seoul Foundation for Arts and Culture
Jihye7980@gmail.com

Abstract: Creativity has been strongly emphasized in diverse areas but mostly in design and culture industry because of its intimate role and function. Recently, in this reason, creativity education in childhood has been becoming a major issue in art and design realm. The research investigates creativity education using interactive multimedia in effective education for children.

Key words: Design Education (primary keyword), Design Creativity

1. Introduction

This research starts asking for the question how contemporary art using interactive multimedia experience assist students to grow their aesthetical and creative eyes particularly in visually complex world. It will show interdisciplinary education processes how to understand visual languages and apply them to design creativity experiencing interactive multimedia experience. One of great Gustav Klimt's artworks named Beethoven Frieze is a case study subjected to evaluation within the context of existing theory and practice in the field of multimedia –assisted children's learning. Focusing on visual artworks in terms of significant aesthetic experience, this research investigated elements for creativity education and applied multimedia experience using Gustav Klimt's artwork. Through this investigation, essential elements of multimedia experience and further possibility for aesthetical education to develop children's creativity will be discussed.

2. Multimedia Elements for Aesthetic Experience : Image, Sound, Text and Interactivity

2.1 Image and Sound

Visual images embody complicated text information into simply sensible expression. Beyond basic communication of information, art texts like visual images or audios can express human's state of mind. Robert S. Feldman stated that there is distinction between communication and expression, as it is shown in different media like a newspaper headline or traffic light, with the way of communication being differentiated from symbolic expression. However, in art education using multimedia tools for children, both communication and expression can be delivered in one sense. From multimedia experiences which have been significantly familiar as children's daily experiences, children would learn to communicate and express more easily their creativity. By being assisted from digital technology sharply developed, interactive multimedia includes all of elements of artistic expression with a line, word, sound, extension, and color in time-based virtual space. For children, elements are based on sensory experience when they recognize object. For instance, they identify a thing in

dependence with the other thing. They distinguish objects from what they look like. Thus, visual perception is the primary concern to provide education targeted for children.

2.2 Text and Interactivity

The term 'interactivity' in education focuses on the component that learners participate in the process of interaction. The interactivity provides the system to be able to communicate through computer-based conversation to learners participating virtually, but gives them real-world experiences in association with arts in investigating and changing real artworks. The audio-visual facilities available under multimedia contribute to the user-friendly environment, in which learners can interact with the information presented in multiple formats. It is essential to direct the right way especially for young learners with its constructivist components, which can be called the construction of 'narratives'. The 'narrative' concept has been much debated from the beginning of the World Wide Web service and referred to finding correct information, but more recently, the building of a narrative became a vital element of interactive multimedia. For education using multimedia, interactivity could be used as the 'narrative'. As mentioned, the use of narrative functions may be essential not to be lost in the huge space provided by computer-based world,. Through investigation of many interactive multimedia programs based on fine arts, its advantages and disadvantages are categorized as shown in Table 1.

[Table 1] Investigation of interactive multimedia

Advantages	Disadvantages
- Use of diverse multimedia tools	- Too simple contents
- User-friendly interface design	- Lack of connections with other contents
- Effective use of interactivity	- Lack of constructive narratives

3. My Application: A Study Case in Multimedia Development

3.1. The Target Audience : Children aged between 7-10

In my application, children aged between 7 and 10 considered. This age group is known to start to distinguish visual differences and the understanding of some text-format information. Herbert Read classified the age group seven to ten more in details defined as Descriptive Realism of the age 7-8' and 'Visual Realism of the age 9-10'. (Read, 1943: 5) Children aged 7-8 associate ideas by items, than by the analysis of percepts. When children's ages get to 9-10, they start to paint not only from their own imagination and memory but also from nature, even though its perspective is still vague. As a result, the age group between 7 and 10 which presents the characteristic of perceiving visual 'schema' represented was chosen.

3.2. Creating the Klimt Multimedia Application

[Figure 1]

3.2.1. The Use of Visual Elements

In contrast to composition from scratch, the application based on great visual work requires there to be a clear guide into the interesting aspects of investigation. Besides the artworks of Klimt, there is a need to create visual effects such as user-friendly interface, characters and moving images suitable for children.

3.2.2. The Use of Sound

Within interpretation on the artwork, the narration of voice-over and the stream of music was recorded in the application. The use of sound seems vital in a multimedia project designed for children. The sound in a

multimedia project used sound effects when buttons and moving images appeared. Besides, music is streamed in the application, the fourth part of the Ninth Symphony, composed by Ludwig van Beethoven (1770-1827) which hugely inspired Klimt. Klimt thought the glorification of love and self-sacrifice in Beethoven's music. By combining music and image, the application is designed to make audience senses the mood of romance created by Klimt and Beethoven.

3.2.3. The Construction of the Narratives

[Figure 2]

The build of the narratives is the essential attempt to come across children's minds with great sensibility presented on the artworks of Klimt. For children, even educational project should be an interesting leisure activity. The narrative is built to consider how to make learners feel excited and challenged by the stream of story. The application on fine arts used to have an aim at stimulating children's sensibility and creativity through observing arts. In this sense, the form of the narratives focuses on creating fantasy elements having an appropriate story at children's view. The object, the artworks of Klimt, is deeply contemplated with the narratives having the fantasy elements. The appropriate construction of the storytelling based on fine arts can integrate the development of children's senses and emotions with logical progress.

3.2.4. The Interactivity

[Figure 3]

The process of the narratives is exceedingly linked to the interactivity in multimedia experience. The young learners choose and click on buttons to explore each part of object and construct their own meaning, their personnel journey, based on their own real-world experiences. The application does not include many interactive elements that lead children to play actively like role-play games, yet have attempted to catch children's eyes to participate in the stream of music on the image.

4. Evaluation of the Klimt Multimedia Project for Children

The application is a proto-type. The first impressions that children make out make them to decide whether they continue the investigation or not. In this sense, it was attempted to get the responses from children how they feel from the multimedia work provided. Five children, aged between seven and ten, participated in the venture. Three elements were considered: (1) The Eye-Catching Visual Attractions and Interface Design (2) The Construction of the Narratives (3) The Interactivity.

At first, children responded cheerfully with the appearance of the pleasant characters with music and their moving. Especially, not only children, but also their parents showed curiosity to see the moving images illustrated combining smoothly to the artistic image of Klimt. Yet, some parents pointed out the difficulty in finding buttons to turn a page of the interface, as the model was designed to hide buttons. Regarding the construction of the narratives, some of children and parents said that it seems like experiencing animated books and becoming have interested in Klimt's works. All of them responded to have intention to investigate completed application. From unchanging position when children read books, it is not easy to see some parts very in details. Children responded curiously about the cartoon-like characters, colors, and music. Some of parents asked if they

could participate with the children in creating imagery from those visual elements. This suggestion remains to be considered for further production of interactive participation into the application. From observation of responses from children and their parents, it was investigated that even same aged group shows significantly different levels in the use of computers and different expectations from the same contents on computer depending on the environment which is revealed to them on the computer, or parents' belief on education for children. Although parents and children who answered for the application responded positively, the reason is assumed to be based on the casual conversation in face-to-face.

5. Conclusion

Multimedia programs emerged by a computer have attempted to contribute to the development of children's abilities in diverse ways, further in aesthetical ways offering interactive experiences. As mentioned earlier, the combination of digital technology and aesthetic education has been a main subject in the last years. The research by Schaller and Allison-Bunnell has demonstrated that adults prefer 'simulations and interactive references', otherwise children like to enjoy 'role-play and creative play.' (Schaller and Allison-Bunnell 2002) The form of role-play or creative play can generate extraordinary dynamics around the learning process. In this sense, the Klimt application can be updated further with more embellished interactive contents towards incitement of children's active play in creative way.

A number of educational multimedia projects targeted at children which were investigated throughout the research, tended to use friendly cartoon characters and simply designed interfaces. These well-designed projects indicate constructive narratives that make children to experience picture books virtually. However, most multimedia projects for the aim of art education show artworks in very small-sized windows chronologically without showing clues of emotions on each artwork. Thus, the application emphasized on the aspect of aesthetical senses revealed through the artwork. Further with the application, the ease and comfort use with the function of hyper-linking that infuses other discourses such as history, philosophy, and culture can be provided for its final appreciation in creativity education.

6. References

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