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UKIYO-E: User Knowledge Improvement Based on Youth Oriented Entertainment, Art Appreciation Support by Interacting with Picture

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Abstract : Art appreciation is important as part of children education. Art appreciation can enrich sensibility and creativity. To enrich sensibility and creativity, the children have to learning knowledge of picture such as social and historical backgrounds and author intention. High learning effect can acquire by actively learning. In short, it is important that encourage learning of the knowledge about pictures actively. It is necessary that children feel like interest to encourage learning of the knowledge about pictures actively. In a general art museum, comments on pictures are done through writing. Thus, we expect that this method cannot arouse the interest of the children in pictures, because children feel like boring. In brief, learning about the picture information is difficult. Therefore, we are developing an art-appreciation support system that will encourage learning of the knowledge about pictures actively by children feel like interest. This system uses that Interacting with Pictures to learning of the knowledge about pictures. To Interacting with Pictures, children have to utterance by themselves. We expect that will encourage learning of the knowledge about pictures actively by Interacting with Pictures. To more actively learning, children can choose who talking with by information that location and movement of the children. This system must be able to acquire real-time knowledge of the location, movement, and voice of the children. We utilize the Microsoft's Kinect v2 sensor and its library, namely, Kinect for Windows SDK and Speech Platform SDK v11 for this purpose. By using these sensor and library, we can determine the location, movement, and voice of the children. As the first step of this system, we developed ukiyo-e game that use ukiyo-e to appreciation object. Ukiyo-e is a traditional Japanese graphic art that has influenced the western society. Therefore, we believe that the ukiyo-e game will be appreciated. In this study, we applied talking to pictures to learn information about the pictures because we believe that learning information about the pictures by talking to the pictures is more interesting than commenting on the pictures using only texts. However, we cannot confirm if talking to the pictures is more interesting than commenting using texts only. Thus, we evaluated through EDA measurement whether the user develops an interest in the pictures while talking to them using voice recognition or by commenting on the pictures using texts only. Hence, we evaluated that children have interest to picture while talking to them using voice recognition through EDA measurement. In addition, we quantitatively evaluate that enjoyed this game or not and learning information about the pictures for primary schoolchildren. In this paper, we summarize these two evaluation results.

Keywords : actively learning, art appreciation, EDA, Kinect V2
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