

Comparing 3D Animation and 3D Virtual Reality in Landscape Design Presentation

HADI, Akhmad arifin^{1*} ; FURUYA, Katsunori¹ ; KHRISRACHMANSYAH, Rezky²

¹Graduate School of Horticulture, Chiba University, ²Bogor Agricultural University Indonesia

1. Introduction

The 3D digital model is recently widely used in landscape design presentation. In this research, the two types of 3D presentation model are compared; those are 3D animation and 3D Real-time virtual reality model. Those types are compared because people are getting familiar with both 3D models' type, such as in animation movie, television programs, digital games, etc. The objective of this research is obtaining respondents' preferences about the use of 3D presentations in VR and animation for landscape design presentation.

2. Study Method

The respondents are the landscape architecture students of Chiba University and Bogor Agricultural University who have already studied about fundamentals of landscape architecture and are familiar with landscape design presentation. The 3D model is landscape design of North Sunter Reservoir Forest of Jakarta Indonesia. The design was presented in 3D animation and 3D Real-time Virtual Reality (VR) model. The respondents were asked to play the 3D animation and operate the 3D VR in Windows-based computer. Afterwards, the respondents were asked to fulfill the questionnaire. In the questionnaire, there are descriptive questions to investigate respondents' perception about both 3D models.

3. Result and Considerations

There are 140 respondents consists of 57 respondents who are Chiba University students and 83 Respondents who are Bogor Agricultural University students. Both of Japanese and Indonesian students are already familiar with 3D game operation. The result shows that Japanese students more interest to VR Model than Indonesian students ($p < .01$), and the Indonesian students more interest to 3D Animation than Japanese students ($p < .05$) (Figure 1). Indonesian students more prefer to 3D Animation because it is more natural looks than 3D VR Model ($p < .01$). Indonesian students also more understand about the design in 3D animation comparing with 3D VR presentation ($p < .01$). Japanese students more interested in 3D VR presentation because it is easier to operate ($p < .01$). The last question is about the respondents opinion as a young landscape architects and scientists. In relation with the use of landscape design presentation, the proportion of Japanese students who prefer to use 3D VR presentation is more than proportion of Indonesian students who prefer to use 3D VR presentation. Indonesian students prefer to use 3D animation than 3D VR presentation.

4. Conclusion

The viewer perception of using 3D VR presentation and 3D Animation presentation can be influenced by nationality background. The Indonesian students more prefer to 3D Animation because of natural-like performance of 3D animation, and Japanese students more prefer to 3D VR because of the ease of operation. The difference of respondents' preferences is not influenced by the experience of playing 3D game, but is influenced by the performance and ease of 3D presentations.

Keywords: Design Presentation, Virtual Reality, Animation, 3D

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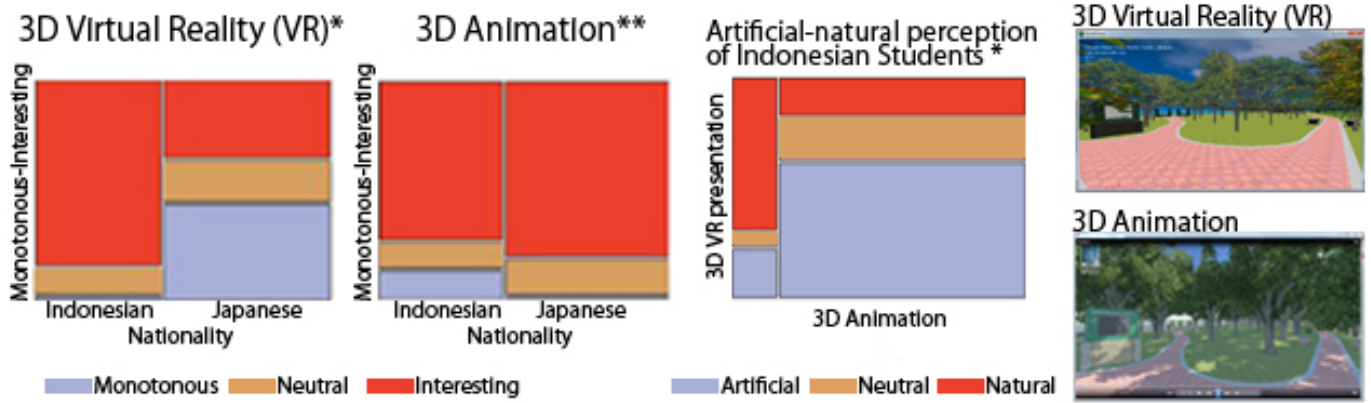


Figure 1. Respondents Preference of 3D VR and 3D Animation Presentation * p<.01 **p<.05