Implementing Collaborative Serious Game for Situated Learning of Japanese Culture in 3D Metaverse

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This presentation introduces our ongoing research and practice on collaborative serious games for learning of Japanese culture in 3D Metaverse. Serious game is a concept that utilizes game-based interaction and dialogues for the purpose of education and training. 3D Metaverse is a platform for constructing immersive virtual spaces with digitized objects and architectures on the Internet. An avatar, or a controllable virtual character in the space, enables the visitors to the 3D space to participate in embodied social interaction with other avatars. 3D Metaverse as an infrastructure of serious games provides a powerful platform for inheriting and sharing traditional cultural heritage from a socio-cultural perspective. First, we demonstrate our Metaverse environment in SecondLife(SL), which is the most popular Metaverse service. The space includes Japanese tangible cultural properties such as Shinto shrine, Buddhism temple, and Noh stage. It also has virtual museums for Kimono costume or Yuzen textile design. Various intangible cultural heritages, such as Noh performance, are also digitized and preserved in the space. Second, we elucidate our experiments of collaborative serious game for learning Japanese culture on SL. In this game, pairs of Japanese and international students respond to quizzes about Japanese cultural practices. Since these quizzes require in-depth knowledge about culture and values, the participants had to refer to guidebooks and exchange their answers or interpretations on traditional Japanese cultural practices. Finally, we describe the result of our analysis on the interaction and learning processes through the collaborative serious game in SL. In these learning processes, the collaborative playing between newcomers and old timers of Japanese culture makes the situational cultural learning between the participants a fun thing to do. In the debriefing session, it was also suggested that the cross-cultural interaction during the game enhanced participants' awareness of not just the other's culture but their own culture.