

Can Digital Technology Replace Leaders in Outdoor Education?

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Abstract

The aim of this study is, to question whether the digital technologies can be the medium to provide a rich experience instead of “leaders” in outdoor education.

In general, outdoor education is enhanced by inviting "participants" into "nature and activities", and within this relationship, the "leaders" are the mediators between the "participants" and "nature and activities". From the perspective of the “leaders” as mediators, there are media used other than just "humans", such as tags with the names of trees and instructions for activities, that connect the "participants" to "nature and activities". However, these media only provide one-way information. Unless the "participants" are very interested, they cannot convey anything more than that, so they are insufficient to provide a rich experience without the mediators "humans".

On the other hand, with the recent development of digital technology(1), the use of the media of mobile devices has the potential to question this. With mobile devices, it is easy to create multiple layers of information, and it is also possible to arouse the interest of "participants".

In other words, using mobile devices does not limit the media in the previous relationship to "humans" alone but allows for expansion to "leaders + mobile devices".

This attempt also encourages reconsidering "instruction" and "interaction" as the role of the leader. By clarifying "instruction" that can be replaced by technology and "interaction to prompt a learning cycle" that humans should do, this study will provide suggestions regarding the shortage of instructors and their training time, which has been a big issue in Japan recently.

Therefore, in this study, we created an application implementing augmented reality technology called "AR Nature Rally" and conducted a questionnaire survey of participants and accompanying elementary school teachers who used these applications. The results showed that using these digital technologies aroused participants' interest and practical learning.

(1) MEXT Research on the Promotion of Youth Experiential Activities "Case Studies on the Use of Digital Technology to Deepen Experiences of Nature" https://www.mext.go.jp/content/20230421-mxt_chisui02-100003338_2.pdf

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