

Users were presented with the virtual tours and plain photos/videos. An online survey was conducted and the results were carefully analysed by the researcher. The results of the research indicated the virtual tours had a greater influence on tourists compared to photos/videos largely due to their interactive nature. Finally, the study recommends further research on the use of virtual tours on fighting crime through crime scene investigation, learning through creation of tutorials and reducing the size of virtual tours.

Facilitating Group Interaction using Swarm Intelligence in Collaborative Mobile Learning

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This research study investigates how group interaction can be facilitated using Swarm Intelligence algorithms to improve collaborative m-learning. M-learning is a learning approach that can not be ignored, especially with the current generation. The 21st century learners are shifting from the usage of desktop computers to mobile devices. Mobile devices such as mobile phones are easily affordable and their availability facilitates learning anywhere anytime. Other than using mobile devices for downloading learning content by individual learners, they have been used as sharing platforms for discussions.

However, bringing participants together using mobile devices as the facilitating tools do not guarantee fruitful discussions. Effective learning is realized when all participants take place in the discussion, when their contributions impact positively to the discussion, and when the required help is provided on time. However, various challenges exist which hamper fruitful interaction. Some group members may shy away from participating, others may dominate in their contribution, or others may not know whether their contribution was acceptable or not. At times, group members may not know how to reach an agreement on certain issues after discussion. Thus, there is a need to facilitate discussion to ensure that the participants gain from the collaborative learning. This raises the need to consider those challenges in the design of collaborative environments.

The use of Swarm intelligence in this research is informed by its very nature of achieving collective performance which an individual cannot achieve alone, which is in tandem with the main concept of collaborative learning. This study uses Swarm Intelligent algorithms to implement some of the strategies used to improve interaction in collaborative learning. These strategies are turn-taking, group negotiation and timely feedback. Each of these strategies uses a particular and slightly modified Swarm intelligent algorithm that suits each of the situations.

Some experiments will be done to determine the effects of facilitating the interaction using swarm algorithms and its impact on collaborative m-learning.

Keyword: Group Interaction, Collaborative mLearning, Swarm Intelligence.