

Impact of an Instructional Design Model in a Mathematics Game for Enhancing Students' Motivation in Developing Countries

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Abstract : One of the biggest reasons of dropouts from schools is lack of motivation and interest among the students, particularly in mathematics. Many developing countries are facing this problem and this issue is lowering the literacy rate in these developing countries. The best solution for increasing motivation level and interest among the students is using tablet game-based learning. However, a pedagogically sound game required a well-planned instructional design model to enhance learner's attention and confidence otherwise effectiveness of the learning games suffers badly. This research aims to evaluate the impact of the pedagogically sound instructional design model on students' motivation by using tablet game-based learning. This research was conducted among the out-of-school-students having an age range from 7 to 12 years and the sample size of two hundred students was purposively selected without any gender discrimination. Qualitative research was conducted by using a survey tool named Instructional Material Motivational Survey (IMMS) adapted from Keller Arcs model. A comparison of results from both groups' i.e. experimental group and control group revealed that motivation level of the students taught by the game was higher than the students instructed by using conventional methodologies. Experimental group's students were more attentive, confident and satisfied as compared to the control group's students. This research work not only promoted the trend of digital game-based learning in developing countries but also supported that a pedagogically sound instructional design model utilized in an educational game can increase the motivation level of the students and can make the learning process a totally immersive and interactive fun loving activity.

Keywords : digital game-based learning, student's motivation, instructional design model, learning process

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