

Open Educational Resource in Online Mathematics Learning

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Abstract : Technology, multimedia in Open Educational Resources, can contribute positively to student performance in an online instructional environment. Student performance data of past four years were obtained from an online course entitled Applied Calculus (MA139). This paper examined the data to determine whether multimedia (independent variable) had any impact on student performance (dependent variable) in online math learning, and how students felt about the value of the technology. Two groups of student data were analyzed, group 1 (control) from the online applied calculus course that did not use multimedia instructional materials, and group 2 (treatment) of the same online applied calculus course that used multimedia instructional materials. For the MA139 class, results indicate a statistically significant difference ($p = .001$) between the two groups, where group 1 had a final score mean of 56.36 (out of 100), group 2 of 70.68. Additionally, student testimonials were discussed in which students shared their experience in learning applied calculus online with multimedia instructional materials.

Keywords : online learning, open educational resources, multimedia, technology

Conference Title : ICHE 2015 : International Conference on Higher Education

Conference Location : London, United Kingdom

Conference Dates : May 25-26, 2015