

A Study of Science Teachers in Online Courses

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Background

My interest in the quality of online education led me on the path to choose my AR project. I acted as a Teacher Assistant (TA) for Dr. John Graves' courses offered online through Montana State University-Bozeman during the fall 2008 and spring 2009 semesters. Two of these courses were the standard EDCI 504 classes, which are part of the curriculum for the Master of Science in Science Education (MSSE) program at Montana State University-Bozeman. The BSSP 504 and 505 courses were offered as part of the Big Sky Science Partnership (BSSP) program also offered through Montana State University-Bozeman. The BSSP program is for teachers located on Indian reservations or in schools with high Native American populations.

Focus Question

Does taking fully online education classes impact the quality of education for science teachers?

One sub-question that developed during my research was, Does the fear of technology affect the students' feelings towards the quality of online instruction?

Literature Review

An online education allows for the furthering of education for those that are unable to attend classes in a face-to-face classroom environment. These students can attend courses on their own schedule, from home or work, and they have access to courses they would not otherwise be able to attend. A quality education can be achieved through online courses, but it takes work on both the part of the student and the instructor to make sure there is the interaction that occurs in a face-to-face classroom. It is this interaction that provides a beneficial learning environment to students previously unable to attend classes to further their education.

Methodology

Three main types of data collection techniques were used. An Online Learning Confidence Survey and an Online Learning Opinion Survey were administered as pre and post data collection instruments. The Online Learning Confidence Survey was used to see how well the students could handle the different "challenges" offered by an online course. The Online Learning Opinion Survey was used to determine the students' attitudes towards online courses. Both surveys were Likert-style in design. The Online Learning Interview Questions were administered near the completion of the semester. For my sub-question I also observed the students' postings to see if any fear of technology could be seen.

Data Analysis

Overall, the students felt confident about using computers to complete an online course, they weren't afraid to use technology, and they felt that online courses offered the same quality of education that a campus course did. The bottom line: online learning does not impact the quality of education received by science teachers.

References Cited

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