



Physical Anthropology Section - 2013

H17 Online Pedagogical Methods in Forensic Anthropology: Effective Strategies for the Virtual Field and Lab

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After attending this presentation, attendees will become aware of online or e-learning alternatives for developing and disseminating curricula in introductory forensic anthropology courses. This presentation will offer an example of an online forensic anthropology course that meets objectives as equivalently and effectively online as it does face-to-face.

This presentation will impact the forensic science community by increasing awareness of online learning and its application to introductory forensic anthropology courses. Online learning (for example, fully online courses, blended learning, game-based learning, and social networking) is one of the fastest growing trends in education. The advantages of online learning to students, instructors, and universities are well documented with the exception of certain disciplines like forensic anthropology. While there are many empirical studies of online learning, there is a paucity of research on best practices in anthropology, especially subdisciplines in bioanthropology, archaeology, and forensic anthropology. It would be useful to know how anthropologists are utilizing online learning tools and carefully consider the innovations that will increase the quality of online anthropology courses.

The concern that courses cannot be taught effectively online seems to be elevated in certain disciplines where the lack of hands-on laboratory demonstrations and exercises presents a major disadvantage. Forensic anthropology laboratory and field experiences are outstanding aids to learning but even traditional classroom environments may not have osteological collections or opportunities for conducting work in the field due to financial or logistical constraints. Indeed, online courses in forensic anthropology may require more creativity and effort than other anthropology courses but there are effective mechanisms to conduct virtual laboratory sessions without the tactile use of human remains.

The effectiveness of the online approach was tested by comparison of student learning outcomes and satisfaction between online and face-to-face forensic anthropology courses taught at Oregon State University and Western Oregon University. All sections of course material (readings, lectures, assignments, due dates, and other requirements) were similar in content but administered differently for each course. Four indicators of student success were examined using independent *t*-tests: cumulative lab scores, cumulative quiz scores, project scores, and total points earned. Two indicators of student satisfaction were examined, also using independent *t*-tests: satisfaction with the course as a whole and the instructor's contribution to the course. These two components of the evaluations were the same in content but administered differently between online and face-to-face courses.

Results demonstrate that course objectives are equally achieved and teaching is effective in both cases as student success is as high online as it is on campus. The results of the *t*-tests showed that of the four comparisons, none were significantly different (*p*-value>0.05). Additionally, student perceptions of the courses are above average for both methods of delivery. The results of the *t*-tests showed that there was no statistically significant difference in combined course and instructor satisfaction. Unedited student comments also tend to demonstrate fulfillment with the online course.

This study is likely the first to examine the efficacy of online instruction in forensic anthropology. The results provide a clear example of the design and delivery of online labs and experimental projects that may be useful for other anthropology and forensic science courses. Despite the challenges associated with using skeletal remains as teaching tools, it appears that students succeed in learning online and are satisfied with the results. Technology provides methods that meet today's student, instructor, and institutional needs but additional discussion is needed to improve online learning within forensic anthropology.

Forensic Anthropology, Pedagogy, Online Learning