E108 High-Impact Learning Within a Project-Based Learning Course

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Learning Overview: After attending this presentation, attendees will understand how high-impact learning activities can be implemented into forensic science courses, even courses that are heavily activity based.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by demonstrating the pedagogical benefits of high-impact learning in a forensic science curriculum.

The Association of American Colleges and Universities in 2008 published a report on High-Impact educational Practices (HIP) and their importance to undergraduate education.[1] Effective HIP activities share several commonalities: expense of considerable time and effort, faculty and peer interaction, experience of diversity, experience feedback, and learning in different settings (i.e., outside of the traditional classroom lecture). HIP is all about focusing student engagement in their own learning. Ten proven HIP activities have been identified. Included among these are: (1) collaborative assignments and projects, and (2) undergraduate research.

In 2012, in response to a university-wide initiative, the Anthropology and Sociology Department at Western Carolina University adopted a requirement that all majors participate in an Engaged Learning Experience (ELE). This requirement could be fulfilled in a number of manners, including enrolling in an ELE-designated course. Anthropology 401, Bone Trauma and Modification, is a Project-Based Learning (PBL) themed course in the forensic anthropology curriculum.[2] Students engage in group activities involving the predetermined replication of bone traumas using non-human animal bone. These replications are carried out in small groups of three to five students. In 2018, this course was designated an ELE course. This meant that, in addition to the regular PBL activities performed by all students in the course, the 13 ELE participants were required to perform a separate and unique bone trauma replication project. They were also required to make a public PowerPoint® presentation of their results and submit a written report.

HIP is by its nature time- and labor-intensive not only for students but also for faculty. This creates the potential for student and especially faculty participant overload.[3] As Anthropology 401 is a laboratory course, introducing an added laboratory component in the form of the ELE activity compounded the logistics of time and space in the laboratory. Essentially, an HIP course had added to it a second HIP component. One solution to avoid synergistically intensifying time and space requirements was to make the ELE activity group-optional. Participants could perform their activity individually or in groups of up to four individuals. The latter was strongly encouraged and only one student chose to work on their own.

Each year, the ELE projects are internally reviewed by the department. This review process includes direct observation of the ELE public presentation as well as the physical products of the student-engaged research. Of the 13 Anthropology 401 projects submitted in 2018, 12 met and 1 exceeded expectations for quality, scientific rigor, and meeting the spirit of engaged learning. The one project that exceeded expectations was submitted by the single student participant.

Reference(s):

1. Kuh G.D. High-impact educational practices: what they are, who has access to them, and why they matter. *Assoc Ame Colleges & Univ*. 2008.
2. Williams J.A. Group Experiential Learning in the Forensic Science Classroom. *Proceedings of the American Academy of Forensic Sciences*, 60th Annual Scientific Meeting, Washington, DC. 2008;24:572.
3. Halonen J.S., Dunn D.S. Does "high-impact" teaching cause high-impact fatigue? *Chronicle of Higher Education*. 2018. https://www.chronicle.com/article/Does-High-Impact-/245159.

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