

CAN VIDEOS MOTIVATE? EFFECT OF VISUAL PRESENTATION OF LEARNING STRATEGIES ON STUDENTS ACADEMIC MOTIVATION

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A lack of self-regulating learning strategies can negatively impact students' academic motivation and generate more stress in a course. Previous studies have shown that students who were able to increase their motivational beliefs and had the ability to use self-regulatory facets had more successful academic careers in comparison to their peers. Additionally, utilizing media outlets such as video or text formats in order to provide lecture material have also shown to be beneficial in improving student's understanding of subject matter and engagement in the classroom. However, there is insufficient research that comparatively examines the effectiveness of learning strategies and media formats to assist students' performance to display which of the two options is more successful for student learning. This study uses three student treatment groups, where students are divided into three groups: having no tips on learning strategies, tips presented through textual posts, and tips presented through videos. Students' initial and final survey responses are utilized to monitor changes in their academic motivation and stress. Although this is an ongoing investigation, it is expected that the delivery of learning strategies through videos will allow for a quantitative increase in academic motivation, and decrease in perception of stress for students towards their courses.

Poster Presentation D: Science Education

THE EFFECT OF GLOBAL AND LOCAL EXPERIENTIAL OPPORTUNITIES ON STUDENT LEARNING IN A SCIENCE COURSE AT THE UNIVERSITY OF TORONTO MISSISSAUGA

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We are currently investigating the effect of global and local experiential opportunities on student learning in Fundamentals of Human Anatomy and Physiology (BIO210) at the University of Toronto Mississauga. Our objective is to determine how student experiences are affected by different assessment streams in this course and whether these different experiences have an impact on academic performance and personal growth. Students enrolled in BIO210 during the 2017-2018 academic year were presented with four assessment options in September 2017: (1) best five out of six term tests; (2) best four out of five term tests and an assignment disseminating anatomy and physiology related concepts to a wide audience; (3) best four out of five term tests and an assignment based on a 12-hour domestic community-engaged learning experience pilot; and, (4) best four out of five term tests and an assignment based on an international learning experience pilot in Peru. Students in each assessment stream completed online pre- and post-surveys and participated in focus groups in order to track student personal growth and academic performance. Additionally, we will assess students' social awareness through a written assignment and final exam questions. Past results suggest that students perceive international experiences as beneficial to their development outside the classroom in improving their analytical skills and widening their global perspectives. Our predictions for this year are in line with past results but we are continuing to collect and analyze data for the year 2017-18.

Poster Presentation

Category D: Science Education

DEVELOPING GEO-CACHING MULTIMEDIA RESOURCE FOR UTM ORNITHOLOGY TRAIL

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The overall goal of this project is to create an educational resource for University of Toronto Mississauga (UTM) students and the public in the form of an ornithology-themed geocaching trail around the campus. Users of the trail will use their smartphones to access interactive educational material online via QR-code labels at strategic points along campus trails. This material will include video footage of different species, visualizations and audio files of their song, still images, student-generated data on species diversity, informational texts and interactive questions. In the course of our Summer research projects we gathered video footage, still images and audio recordings of more than 60 avian species, authored informational texts, and performed surveys of species diversity. Video, image and audio files were edited and assembled into a multimedia database with which the online content of the trail will be constructed. Interactive educational questions and quizzes are currently being developed and will be included in the online implementation of the geocaching trail this year. This work will also serve as a foundation for ongoing student led data collection and experiments focused on the birds of the UTM campus, which will in turn serve as a resource for undergraduate education in biology courses at UTM.

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