Anthony Chibba –
Chemistry & Chemical Biology (Science)

Project Title:
Exploring the Use of Social Media as a Tool to Improve Student Classroom Experiences

Project Abstract:

Many students within the Faculty of Science gateway streams take Introductory Chemistry and Introductory Physics as part of their course compliment in year 1, but few students actively consider Chemistry or Physics as a degree program to pursue. The goal of this project is to develop and utilize a companion social media account on Instagram to deliver fun and engaging educational and entertaining (edutainment) content that aligns with the material taught in class in Introductory Chemistry and Physics classes. The content posted will be supplemental in nature with the expectations of improving student interests, attitudes and motivations towards the subjects, The content will also further promote the research that happens in each department on a platform that students are familiar with. Social media is a common tool for communication and expression among younger generation, and we are looking to leverage the platform to communicate content in a platform that they are comfortable and intimately familiar with.

We hope to explore the impact of this strategy on student interest of the material, their course experience, and their learning outcomes and determine whether this can be an effective tool for recruitment in low enrolment programs. If successful and impactful, we hope to develop best practices and workshops for others who would endeavour to use social media in the classroom to enhance the student experience.

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Kristina Durham –
School of Rehab Sciences (Health Sciences)

Project Title:
Enhancing Student Learning and Strategic Resource Allocation by Interdisciplinary Anatomy Education

Project Abstract:

Anatomy and physiology (A&P) are foundational and required areas of knowledge for all health care specialists. A&P education that is delivered to interdisciplinary groups of students has been suggested to foster communication and respect amongst students from different health care programs, build interprofessional character, and optimize resource allocation.

This project proposes to develop, deliver, and evaluate introductory-level interdisciplinary A&P classes for Year 1 students in the in the Master of Science (MSc) in Physiotherapy (PT) and MSc in Occupational Therapy (OT) programs at McMaster University. This project aims to provide an enhanced and engaging learning environment, while ensuring that the proposed program changes and instructional models are being applied in a scholarly manner. Furthermore, we expect this project to support strategic resource allocation within the School of Rehabilitation Science's anatomy education program by reducing the duplication of efforts and costs associated with delivering A&P education to the programs individually.

I am applying to the Leadership Fellowship program for two main reasons: 1) to secure funding that will support the scholarly development, implementation, and evaluation of interdisciplinary A&P classes and 2) to enhance my academic leadership potential in aim of one day acting as a leader of faculty and staff as a director of an anatomy program. Completion of the LTL fellowship will allow for development of these skills while ensuring a scholarly outcome that can be used with confidence enhance our A&P curriculum to ensure students receive the best education possible.

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Janet Pritchard –
School of Interdisciplinary Science (Science)

Project Title:
Assessing the impact of a statistics course on Honours Life Sciences students' statistic anxiety, self-efficacy in statistics and 6-month and 1-year post-course completion research opportunities.

Project Abstract:

The objectives of this project are to use mixed methods to investigate the impact of LifeSci 3LX3 on statistics anxiety (assessed using the Statistical Anxiety Rating Scale [STARS] questionnaire) and self efficacy (assessed using the Self-Efficacy Scale for Learning Statistics for Psychologists [SES-Pys] questionnaire) around statistics skills, to use focus group interviews to better understand the student experience in the course and, with students, develop ways to enhance self-efficacy through mastery, vicarious experience, verbal and social persuasion and physiological state for the Fall 2024 course offering. In a 6-month and 1-year follow-up with students who have completed the course in Fall 2023, we will determine whether taking LifeSci 3LX3 is beneficial in securing a thesis, research practicum position or graduate school position, the relevance of the skills taught in LifeSci 3LX3, and self-efficacy around statistics.

This project will benefit student learning as LifeSci 3LX3 will be modified to improve self-efficacy around statistics, which may also reduce statistics anxiety and improve course enjoyment and student performance. The results will also be used to build more intentional links between courses, that may increase self-efficacy around statistics throughout the program, and inspire students to pursue research opportunities.

This Fellowship will benefit my own educational leadership, as it will allow me to build on initiatives that I have been enthusiastic about since I started my teaching position in 2016, such as conducting pedagogical research to understand the impact of courses on student learning and growth, participating in curriculum mapping and revisions, mentoring other faculty and supervising undergraduate research students. This Fellowship will give me the opportunity to network with other faculty conducting pedagogical research to improve student learning, and participate actively in conferences and discussions about statistics anxiety and academic self-efficacy. It will provide a catalyst to collaborating with other SIS faculty to plan future research projects that will help us further understand numeracy skills, statistics anxiety and self-efficacy among larger groups of Honours Life Sciences students.

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Nicole Wagner –
Information Systems (Business)

Project Title:
Interdisciplinary Programs at McMaster: Developing a Maturity Model

Project Abstract:

McMaster University offers many innovative and highly sought after interdisciplinary programs, which focus on integrating knowledge from multiple disciplines and aim to create new knowledge and understanding by crossing disciplinary boundaries. These unique programs are a competitive differentiator for McMaster, continuously attracting numerous strong applicants who go on to become sought after graduates. As the number of interdisciplinary program offerings continues to grow, it is important that the university develops administrative supports to foster this growth, encourage operational excellence, and enhance student experience in these programs.

By their nature, interdisciplinary programs have unique complexities compared to traditional programs since they span multiple Faculties and/or departments. The goal of the project is to co-develop (with faculty and staff from interdisciplinary programs across campus) a maturity model for institutional support for creating, operating, and governing interdisciplinary programs. A maturity model is a framework for assessing how well a process or system is performing. Our study of interdisciplinary programs at McMaster will reveal the key dimensions for consideration as well as provide evidence of levels of achievement, which will inform the development of the evidence-based maturity model. Application of the maturity model will provide specific, actionable steps for improved support of interdisciplinary programs across campus, thereby improving the experience of the students enrolled in them.

As the Director of one of McMaster's unique interdisciplinary programs (the MSc eHealth Program), I have been able to contribute meaningfully to discussions across campus about the unique challenges and opportunities of interdisciplinary programs. Completing the important work proposed of this project will provide me with a holistic, multi-level understanding of the university's interdisciplinary programs and how best to support them. Participating in the Leadership Fellowship program will help me to develop my leadership skills and network of educational leaders across the institution. In combination, this project and fellowship program will position me well to contribute to McMaster's increasing need for leaders to nurture the growth of interdisciplinary programs into the future.