REFLECTIVE ESSAY

Reflections of a professor and undergraduate student-instructors: Our experiences teaching a first-year seminar course and chemistry labs

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The Augustana Faculty is one of the University of Alberta's campuses. It is primarily an undergraduate campus and follows a liberal arts and sciences curriculum. The University of Alberta's 2016 strategic plan, *For the Public Good*, mandates that Augustana be "a living laboratory for teaching and learning innovation, to the benefit of the entire university" (p. 15). As such, we have leeway to experiment with meaningful curriculum innovations that are beneficial to our students and may be adopted by the whole university in the future.

FIRST-YEAR SEMINARS

One such innovation is a first-year seminar (FYS), which is a high-impact practice. All first-year students admitted to Augustana must enroll in one of the several sections of FYS taught—it is the first course they encounter during Augustana's 3-week semester. FYS is structured to be small (maximum of 25 students) and delivered in a discussion-based format. This provides ample opportunity for students to hone their oral and written communication skills. The overall goal is to gradually introduce students to university life and expectations, while still learning about a topic of their choice.

INITIAL THOUGHTS ON FYS

Professor Kariuki

My FYS was titled "Food for Thought." Since this is the first course the students would encounter in university, my goals as an instructor were to enable my students to gain intellectual habits that would serve them well in future courses. Also, I had to maintain Augustana's learning outcomes for first-year seminars, which include the ability to analyze, evaluate, and appropriately use information and ideas from multiple perspectives. As I contemplated ways to be a supportive, empathetic, and compassionate instructor, I decided to use student-instructors in my class. These were senior students who had taken an FYS in the past. Also, the student-instructors had either been a student in my previous FYS class or had taken other classes with me; hence, I knew them quite well.

What did I want from my first-year seminar student-instructors? I wanted them to serve as valued voices in the classroom along with me. In addition, since the tutors are a similar age to the first-year students, they would be able to have positive peer interactions with the

students as well as offer advice on university life in general. Augustana's student body comprises more women than men. Hence, as a male professor I intentionally selected female student instructors to serve as role models for the predominantly female students in my class. Also, I experimented with having two student instructors instead of one as in my past seminars. The intention was to better manage the different roles that I assigned the instructors, especially moderating group discussions. Also, having two student-instructors created a support system where both of them could serve as a sounding board for each other.

Thao Vy

I took an FYS instructed by Professor Kariuki, who was assisted by a student-instructor when I was a first-year student. Upon finishing the course, there were certain aspects I wanted a student-instructor to have and wanted to be that change. I pursued other leadership roles in my second year before Professor Kariuki asked me to be a student-instructor for his FYS course in my third year. Not only was I taken aback by the offer, but I was also honoured to be teaching a class that I previously took.

Rhythm

I never wanted to be an FYS student-instructor, and if it weren't for professors reaching out to me, I don't think I would have considered this role. The lack of drive to pursue this position stemmed from the fact that I never had a student-instructor in any of my previous classes. As such, I was apprehensive of the role they play in class dynamics, particularly in a course as hands on and intensive as FYS. I had a positive experience in my FYS without a student-instructor, so I was not sure if my involvement would be valuable to the students' experience.

FYS: INTERACTION BETWEEN THAO VY AND RHYTHM

Thao Vy and Rhythm

Upon teaching, we did not anticipate how much work it would be to help teach. From our initial responsibilities and day-to-day tasks that Professor Kariuki approved prior to the course, we were invested. Helping teach the course 3 hours every day was only half the battle as we took on additional responsibilities beyond the classroom.

As students, we value any instructor feedback to improve our work in the future. We wanted to apply our values regarding constructive feedback to our marking philosophy for our students. Since all the assignments were writing based, the challenge came from the subjectivity of these assignments. As student-instructors, marking was intimidating, since we were aware that first-year students place a strong emphasis on their grades, which can impact a student's confidence and subsequent performance. We gave plenty of feedback when marking students' assignments, but when we assigned a low grade, we would doubt whether we were being fair and constantly asked each other to also assess the assignments. Coming to the same conclusion on the assigned marks allowed us to become more comfortable in our roles. However, after a few days of the arduous process, we learned that we had to become more confident in our marking ability. This meant putting aside the relationships we forged with our

students to evaluate the content according to the marking rubrics. Even after assignments were handed back, the thought of grades not meeting our students' expectations still stressed us. However, this is where we reminded each other that we marked fairly and hoped that our feedback would help the students improve in the course. It was also a relief to have someone to share our frustrations and concerns with throughout the course as we stumbled through our first experience with marking and holding so much responsibility.

Professor Kariuki

Throughout the FYS, I was very impressed by the professional manner in which my student-instructors carried out all the duties that I assigned them. For example, they demonstrated good organizational skills by sharing their assigned roles quite well and shared responsibilities equally without asking me for help. The student-instructors were also kind to each other and the students in the class. Overall, I felt that the compassionate nature of my student-instructors created a conducive learning environment in the classroom.

FYS COURSE: INTERACTION BETWEEN PROFESSOR KARIUKI, THAO VY, AND RHYTHM

Thao Vy and Rhythm

Beyond the classroom, our meetings with Professor Kariuki became more frequent, starting with surface-level conversations about our students, marking assignments, and preparing for following classes. As the 3-week semester progressed, we developed more trust and were more willing to share our concerns with Professor Kariuki. As such, discussions about bias in teaching; equity, diversity, and inclusion (EDI); and how to guide students instead of giving them answers were at the forefront. What stood out to us was Professor Kariuki jokingly saying, "Welcome to teaching" or "Now you know how I feel." It makes us realize how lonely teaching can be when you are the only person teaching the course. As such, we were all glad to have a support network amongst each other along the way as well. The conversations and advice we learned opened our eyes to teaching and made us value the unique relationship we have with Professor Kariuki as an instructor and a mentor, and what all our professors do for us daily.

Professor Kariuki

The student instructors and I worked well as a team throughout the term. Also, the student-instructors demonstrated positive role models to my students by dressing professionally, coming to class on time, preparing materials in advance of class, and treating each other with respect. The roles I assigned the student-instructors included helping lead group discussions, taking attendance, marking some written assignments, scoring oral presentations, monitoring Food in the News Forum discussions, and making an oral presentation on a topic of their choice. Overall, I felt that the student-instructors carried out the roles I assigned them admirably and beyond my expectation. Not only did they help improve the learning of my students, but they also made my work easier. The positive class environment that they helped create led to a positive learning environment for all students. The student-instructors decided to present a topic about pharming, which is the generation of

pharmaceuticals using animals and plants, to the class. They did a very good job, hence demonstrating good oral communication skills and the standard required for university presentations. At the end of each class, we discussed the duties that I assigned my student-instructors. As a result, I was able to know their strengths and guide them in conducting the assigned tasks where necessary.

FYS COURSE: THAO VY AND RHYTHM AND FIRST-YEAR STUDENTS

Thao Vy and Rhythm

Our role in this course was to foster our students' confidence as they navigated their identity in university. As student-instructors, we had to strike a fine balance between being a student and an instructor. Being a student made us more approachable and personable; however, being an instructor may have made us intimidating, thus deterring students from engaging with us. In addition, being kind and firm may seem like binaries, but this binary accentuates our desire for boundaries, thus establishing respect for each other and our students.

We both found teaching FYS rewarding and cherished our encounters. From casual conversations to strong relationships formed with the students, we felt as if we were students despite our role as instructors. Being able to clarify the students' confusion through our explanations was gratifying since we were facilitating their learning. In addition, having students confide in us about their insecurities and problems was an honour, since it was an indication of the amount of trust they had in us.

FIRST-YEAR CHEMISTRY LABS

Professor Kariuki

The chemistry department at Augustana utilizes undergraduate students as laboratory instructors who are responsible for supervising students during the first-year chemistry labs. To prepare them for lab instruction, laboratory instructors attended weekly technical meetings on lab logistics, safety, and procedures. They also attended weekly seminars on teaching practice, communication, and best practices for student mentorship. A faculty or staff member was also on standby to help with any technical issues during the labs. Since I was the faculty member who was designated to teach the weekly seminar as well as acting as a standby person for some of the labs, the opportunity existed to observe both Thao Vy and Rhythm in diverse teaching environments.

INITIAL THOUGHTS ON FIRST-YEAR CHEMISTRY LAB

Thao Vy

I enjoyed taking the chemistry labs in my first year due to the active learning environment and was impressed by how the student-instructors in my first-year course were personable and professional. I was inspired to become a student-instructor not only for the experience, but also for improving soft skills such as communication and problem solving.

Rhythm

I had been taught chemistry labs by full-time lab instructors in my first year, and it was a challenging time. There was pressure to adapt and succeed in the new university setting, and I felt discouraged because there was a disconnect between me and the instructor, who had expectations of a skill level that were beyond what I possessed. Having experienced this discomfort motivated me to provide a more positive experience for the incoming students as a student-instructor. I was also excited to be involved because, as a student, I enjoy labs and the practical experience they provide.

Professor Kariuki

Since the chemistry lab student-instructors are former students who have taken the same labs, I expected that they would create a relaxed but safe atmosphere for the students in the lab. In addition, I was expecting the student-instructors to have prior knowledge about the labs by reading the lab manual and also attending the weekly technical meetings. Another expectation was the ability of the student-instructors to help students when they encountered technical issues or had questions about the experiments. More importantly, I was expecting the student-instructors to enforce all safety rules in the lab.

FIRST-YEAR CHEMISTRY LAB COURSE: INTERACTION BETWEEN THAO VY AND RHYTHM

Thao Vy and Rhythm

Initially, teaching the chemistry lab was stressful upon transitioning from the traditional classroom in FYS to the lab. Furthermore, we taught different lab sections with different co-instructors. By week 3, navigating safety features and equipment became routine within our respective lab sections. Having teaching experience from FYS gave us confidence, but we had to adjust to the needs of our students. We regularly communicated outside of the lab to talk about our successes and concerns. Because we were familiar with each other's personalities and shared past experiences, it was not difficult to see the lab from the other person's perspective. Despite not teaching together, we felt as if our relationship as colleagues was strengthened because of each other's willingness to listen and give suggestions to improve, thus providing emotional support.

FIRST-YEAR CHEMISTRY LAB COURSE: INTERACTION BETWEEN THAO VY, RHYTHM, AND PROFESSOR KARIUKI

Thao Vy and Rhythm

The interaction between us and Professor Kariuki in the lab course was similar to a student and professor relationship instead of a professor and colleague relationship as observed in the FYS course. Despite our strong relationship with Professor Kariuki, we were treated equally as our co-instructors. Furthermore, we gained confidence from teaching the FYS course and were willing to share our insights and suggestions on teaching with our co-instructors and lab supervisors too.

Professor Kariuki

Keeping in mind that the student-instructors are teaching the chemistry lab for the first time, my goal was to ensure that there was always open communication between me and the student-instructors. This approach enhanced their confidence since they knew that they could always count on me to offer any help that they needed during the lab. This tactic worked well since, during the lab supervision, the lab instructors demonstrated a good command of the lab techniques, safety rules, and procedures. They also circulated during the lab, dealing with any issues or answering any questions from students. Any time they had issues with the lab, the student-instructors freely approached me for help.

FIRST-YEAR CHEMISTRY LAB COURSE: INTERACTION BETWEEN THAO VY AND RHYTHM, AND FIRST-YEAR STUDENTS

Thao Vy and Rhythm

Initially, students needed time to adjust to the lab environment because, for many, it was their first time using lab equipment. But as the semester progressed, we formed genuine relationships with our students based on mutual trust. What contributed to this relationship was the lack of supervision from our lab supervisors. There was less pressure to always be model student-instructors, and we were able to be ourselves around the students. Instead of constantly hovering over the students like in the FYS course, we assumed our chemistry lab students were somewhat acquainted with the university. As such, they would approach us for help themselves, thus encouraging learning based on one's desire to learn. Furthermore, the chemistry lab course was geared towards science students, thus enabling us to share our passions more easily compared to FYS with students from various disciplines.

NOW WHAT?

Thao Vy and Rhythm

Taken altogether, both courses offered different teaching environments and curriculums and required us to employ various teaching strategies to accomplish the learning objectives. However, both courses transcended the different titles we have in university such as "professor" and "student." We simply became colleagues whose words and actions combined are geared towards our students' wellbeing and success.

In the process, Professor Kariuki ushered us into teaching and all its complexities. We faced challenges that made us question our competency as student-instructors, but this was offset by the support we received from each other and the moments we had with our students who were our teachers in the course too. As such, we have gained a greater appreciation for all instructors and are able to relate to them more in the university courses we take. And although we currently want to pursue careers in the medical field, teaching as a career is one of many paths we will consider as we navigate our undergraduate education.

From our teaching experiences, we demonstrated how undergraduate students are also capable of teaching university-level arts and science-based courses. FYS made us reflect on our first-year experience and challenged us to teach in a way that would have made our first-year

selves proud. The chemistry course taught us how to be professional while fostering growth of technical skills and instilling safety habits among the students. Both courses showed that teaching is not static. Teaching means being aware of what our students are going through and the context in which it takes place. And instead of harboring a competitive classroom environment that we were accustomed to as first years, teaching means creating a supportive environment to provide an equal opportunity for all students to succeed.

Professor Kariuki

The experience of mentoring students who are also mentoring other students was unique. The overall experience reminded me that teaching and learning are not linear processes and that learning can happen both ways, from teacher to student and also from student to teacher. By observing how empathetic and flexible my student-instructors were to my students, I was reminded to always have the same characteristics in all my classes. Also, I experienced a teaching and learning synergy that I have not experienced before in classes without student-instructors. Equally important, I was very gratified as I read about the skills, which included teaching pedagogies and flexibility, that my student-instructors acquired from our teaching experience. Our daily meetings at the end of each class were integral to the teaching and learning growth experienced by all of us.

For both the FYS and the weekly seminars that I taught, I had to raise my game and make sure that I was more prepared than usual in order to follow the same directives that I was asking from my tutors.

Both the first-year labs and seminar were a place of mutual respect among the instructor, tutors, and students. My interaction with my tutors was like a breath of fresh air that gave me new ideas about teaching. I am grateful for the opportunity, and I look forward to the next time that I teach the class with a new set of tutors and experience a similar rewarding pedagogical partnership.

NOTE ON CONTRIBUTOR/S

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