

Teaching Philosophy Statement

I began my journey as an educator teaching high school science and mathematics. Now, finding myself teaching at the undergraduate and graduate level in the Bachelor of Education program, I recognize that I have always been guided by my commitment to the following three principles. These principles are also at the heart of my research because of their importance to my personal teaching philosophy. It is an iterative cycle in which my teaching philosophy guides my research and in turn, my research findings enhance my teaching practice.

First is **my commitment towards the development and use of authentic assessments that guide the learning tasks** presented in my courses. I believe it is important to present students with assessments that are real and relevant to their future roles (e.g., academic researcher or classroom teacher) because it allows them to develop and apply the knowledge and skills that they will use. For example, in my graduate *research design and methodology* courses, students use the Pan-Canadian Assessment Program (PCAP) dataset to learn a variety of statistical analyses so that they can write a conference paper as their final learning task, and which they may subsequently present at a conference. In fact, several of my students have presented this learning task as papers at conferences such as the Canadian Society for the Study of Education (CSSE) annual conference. In my undergraduate classes, students develop the knowledge and skills to write an Individualized Program Plan (IPP). Teachers are required to develop IPPs for all K-12 students identified with special education needs, which makes this an important component in today's inclusive learning environments.

Second, **I am committed to the use of individualized formative feedback to improve student learning**. Formative feedback is important for the improvement of student learning because the feedback can be used to better understand a concept or master a skill. In order to maximise students' use of the formative feedback, I consider both the technical skills and affective elements of providing feedback while designing my courses so that students are provided with opportunities to use the feedback. For example, in my large undergraduate courses, I provide extensive marker reliability training to teach scorers how to provide meaningful formative feedback so that students may be receptive to the comments. The students' IPP learning task is also split into two parts, so that students can use the feedback from Part I to enhance their IPP before re-submitting it with Part II of the task. In my graduate courses, I provide students with weekly feedback through their SPSS laboratories so that they can enhance their statistical analytic skills in preparation for their final projects.

Third, **I am committed to building a positive and trusting relationship with my students**. Research literature strongly supports the importance of positive relationships in the classroom so that students are more likely to trust and be receptive of the instructor's lessons and feedback. Relationships in small graduate classes are relatively easy to develop, but in my large undergraduate classes I purposefully arrive early and stay after class so that I may chat with my students and get to know them. I usually do not get to speak with each of my 400+ students during this period of time, but many students appreciate these small conversations, which is indicated by their Werklund School of Education Teaching Feedback Form comments: "[Man-Wai] made an effort to speak with students before class and made a point of remembering names and small bits of information about as many students as she could" (Student comment - EDUC 445 Winter 2016). This comment indicates that students were aware of my attempts to build a positive relationship with them.

Descriptions of Specific Strategies

1) Motivate Students' Interest and Learning, and Establish Relevance of Subject Matter: Authentic Assessments

Authentic assessments are an essential design component of the learning tasks in my courses. Students' understanding of these assessments help increase their motivation and engagement with the learning tasks as the skills developed are aligned with the needs of their future careers.

The use of authentic assessments to increase student motivation and engagement is a part of my teaching philosophy and guided a research study, for which I received \$10,000 in funding from the Werklund School of Education (WSE) Office of Teaching and Learning. In this study, I collaborated with the WSE Integrated Services in Education lab where psychoeducational assessments are administered to K-12 students. I developed an IPP learning task using some real K-12 students' assessment profiles to increase the authenticity of the assessment. The research study associated with this learning activity collected evidence that supported its authenticity and students' motivation and engagement with the IPP task administered to the EDUC 445 students. The results of this study have been used to establish the authenticity of the IPP task by explaining to students that school psychologists and teachers from local schoolboards provided evidence to support the knowledge and skills developed during the task are authentic to what students will experience in their future classrooms. This explanation increased students' self-reported engagement and motivation with the learning task (**Chu, Wilcox, Jones, & Young**, submitted for review). Providing students with evidence that this learning task is authentic to their future classroom helped to highlight the importance of this activity in relation to their development as a teacher.

I also used authentic learning tasks for the Research Design and Statistics I (EDER 618/718) graduate course. The learning tasks required students to write a conference proposal, conduct statistical analyses using the SPSS software, present the findings in an oral presentation, and prepare a manuscript. Students' final course project is presentable and publishable because they use real Canadian student assessment and survey data (e.g., PCAP 2016 data) from the Council of Ministers of Education, Canada (CMEC). Due to a partnership I established with CMEC three years ago, EDER 618/718 students are allowed to use CMEC data. During the upcoming CSSE annual conference at Western University, CMEC plans to host a symposium session for students, including mine, to present their projects. This will provide our students with an opportunity to present their course projects at a national-level conference, which is authentic to their experiences as academic scholars and researchers. This opportunity had increased students motivation and engagement with the course's learning tasks because many of the Fall 2019 EDER 618/718 students will be presenting their projects during CSSE 2020.

2) Set Clear Goals and Expectations for Learning in Courses and Individual Learning Activities: Rubrics and Validation Processes

Presenting clear goals and expectations for each of the learning tasks presented during the course is important to ensure students understand what is being asked of them and how the course was designed. My courses are designed to help students achieve competency with a set of learner outcomes; as such, explaining my thought process during this development phase allow students to be a part of my instructional team and understand why specific learning tasks are designed a specific way and the importance of each task.

Part of the explanation of the course and learning task design process includes a discussion about the rubrics being used to assess the tasks. In alignment with my use of authentic assessments, validity evidence was also collected to ensure the scores students obtain from these rubrics allow me to make claims that a passing grade on the learning task represent an acceptable level of quality in the real-world. Specifically, for the EDUC 445 IPP learning task validity evidence was collected to ensure a passing grade on our learning task is equivalent to developing an IPP that meets the standards of the local school boards. These school board standards for IPPs and the validity evidence for the rubric are explained to both students when we review the knowledge and skills related to this learning task and instructors during our marking reliability training. We also explained the marking process of the learning task and how we set our marking standards based on the validity evidence collected to ensure students who receive a passing grade on the learning task will be able to develop an IPP that meets the minimum standards of their future school boards. By explaining the validation process and validity evidence obtained from local school psychologists and teachers, students and markers may better understand the goals and expectations of the learning task as well as knowledge and skills associated with this learner outcome. Students in the course have indicated that the validity evidence for that learning task helped them better connect their classroom experiences with real-life expectations.

3) Design Learning Experiences That Actively Engage Students, and Encourage Collaboration: Active Learning

Designing hands-on learning experiences for students flows from the idea of *doing* as a way of *learning*. This idea of doing something as a way to learning extends and complicates the relationship between knowledge and skills — practice “requires coordination both of knowledge and skill simultaneously” (National Research Council, 2013, p. 41). This pedagogical framework gives structure to the learning environment I create with the design of my courses. During my large undergraduate lectures, I often conduct hands-on activities within the large plenary lectures as a way to actively engage students and encourage collaboration during the learning experiences. For example, during one of the plenary lecture classes for EDUC 445, students participate in a paper-crane folding activity in which students are broken up into small groups with one student being the teacher (usually a volunteer with experience with origami) and the other students following the instructions to fold a paper crane. The ‘teacher’ provides formative, process-based feedback to his/her ‘students’ while the students monitor their emotions and receptivity of the feedback as learners. At the end of this activity, we discuss the importance of providing formative feedback throughout the learning process instead of relying on summative feedback at the end of the activity as well as the technical qualities of feedback that maximizes students’ receptivity and the use of the feedback. During the discussion, students were reminded of their readings, which highlight different technical elements of formative feedback so that they may link their in-class and prior experiences with the literature. This active-learning task works well in a larger class and students have indicated that they are more engaged with the course material and discussions. Students have indicated that learning through these activities helps them better remember the contents of their readings and plenary lectures; they are also more engaged with the lecture material during the post-activity discussions.

4) Challenge Learners to Develop Their Critical Thinking and Independent Learning Abilities: Course Design

Again, building on the idea of *doing* as a way of *learning*; in addition to increasing engagement and collaboration, this idea also focuses on the diverse ways to develop competencies such as critical thinking and learning approaches that align knowledge with real-world practices (National Academies, 2013). Although EDER 618/718 does not have a specified laboratory component, I designed a set of hands-on, weekly SPSS laboratory tasks for the last half an hour of each 3-hour lecture so that students may learn how to analyse data in an authentic learning environment. These in-class laboratory tasks were designed to provide low-stakes formative feedback so that students may use real student assessment and survey data to develop their critical thinking skills in an emotionally-safe environment that allowed students to learn from their mistakes instead of being penalized. The main purpose of these laboratory tasks are to provide students with an opportunity to apply lecture content into practice.

These laboratory tasks, which guide students to learn various statistical analyses using PCAP data, were so well received by colleagues at CMEC, that they were shared with other educators across the country through the CMEC website, benefiting even more learners (<https://www.cmec.ca/709/Overview.html>). My students have indicated that as they become proficient with the laboratory tasks, they feel more confident with conducting the analyses for their course project. The laboratory tasks help students develop independent learning abilities by practicing and mastering various statistical analysis skills. Additionally, the final course project focuses on developing critical thinking because it requires students to apply the analysis skills developed during the laboratory tasks in their final course projects which require them to conduct a quantitative analysis project that could be presented at a conference.

5) Design Student Assessment Strategies that Enhance Learning, and are Appropriately Aligned with Intended Learning: Effective Assessment Strategies.

As an educational assessment researcher, I am extremely invested and interested in the design of the learning tasks that I administer to my students. Assessments play a much larger role than simply measuring students' knowledge and skills. They are an integral part of the learning process in terms of providing vital feedback to instructors and learners that may be used to enhance learning. There are many aspects of assessments that need to be considered when designing learning tasks for a course – namely, curriculum-assessment alignment and validity to assessment claims.

First, the alignment between learner outcomes and the assessment is one of the most significant high-yield strategies for improving student achievement (Pellegrino, 2006). In my courses, I explicitly indicate which outcomes are being addressed by each measure and share that information with students and instructors so that they understand what is being asked of them and why the learning tasks were designed that way, as previously explained in my second teaching strategy focused on setting clear goals and expectations. This type of curriculum-alignment activity guides both my research and teaching practices; as such, the alignment process that I use to explicitly align learner outcomes with the learning tasks are published (Chu, Aston, Farrell, Tate, & Hlousek, 2019).

Second, ensuring valid claims may be made from the assessment allow students to properly prepare for the challenges they face in the real world. For example, the validity evidence collected for the IPP learning task allowed students and instructors to better understand the standards that are required from local schoolboards so that the scores provided on this task are representative of real-world standards. This validity evidence helps support the achievement levels and authenticity claims made, which allow the learning task to align with the learner

outcome of preparing students for the needs of their future classrooms (Chu, Wilcox, Jones, & Young, submitted for review).

6) Design Strategies to Facilitate Feedback (e.g. Instructor, Self, and/or Peer) on Students' Learning to Motivate and Support Progressive Learning and Growth: Solicitation of Feedback - Learning from Students to Benefit Students.

The investigation and use of formative feedback informs and is present in my research and teaching practice. As such, the idea of formative feedback is often highlighted in my approach towards teaching and learning. I have implemented specific strategies in the EDUC 445 large-lecture plenaries to ensure formative feedback is used to enhance student experience within



the course. Specifically, throughout the year, I partner with the Education Students' Association by working with their First Year Representatives (FYRs) to ensure open dialogue between the students and the EDUC 445 instructional team. The FYRs and I usually meet twice during the Fall semester to gather student feedback some of which I incorporate into my course design. Additionally, during the Winter semester, we meet once a week to ensure students' feedback is being

heard and acted upon wherever possible. Last year, students recommended that the order of our lectures be switched around, which would allow them to start working on their IPP learning task earlier so their workload was more balanced with their other courses. The Undergraduate Programs in Education office confirmed that it was possible to make changes to the course outline and the EDUC 445 instructional team acted on the students' feedback by changing the order of our lectures.

Additionally, during every lecture, it is important to have both the EDUC 445 students and instructional team receive feedback. Since EDUC 445 is taught in a large plenary lecture, we utilize the Top Hat software system so that I may receive instant feedback on students' understanding of certain concepts. Top Hat is a tool that allows students to respond to in-class questions and interactive activities using their smartphone, tablet, or laptop. This system has been shown to increase student engagement and provide instructors with instant student feedback. This feedback allows me to make changes to the way I am presenting the material to students and address any areas of weaknesses immediately. Students have also reported being more engaged throughout the lecture when they are presented with Top Hat items that require them to process some of the presented content and showcase their understanding in an emotionally safe learning environment. Use of the Top Hat feedback system supports a relatively safe learning environment within my plenary lectures. Because the feedback is collected anonymously, I can address student responses without identifying specific students.



Figure 1. Discussing TopHat results with EDUC 445 students

7) Exhibit Respect for Students, Which Includes Showing Interest in Students' Inquiries and Ideas: Communication and Openness

Continuous communication with students and being open to their feedback is my way of showing students that I am interested in their inquiries and ideas, which is a sign that I respect students. As explained in the previous section, I continuously seek out different paths for students to engage in meaningful dialogue with me and to provide me with formative feedback so that I may enhance my practice. As a part of my teaching philosophy of building strong and trusting relationship with students, I provide multiple ways for my students to communicate with me. With small graduate classes these discussions are often informal (e.g., e-mails, phone calls, or virtual/face-to-face meetings); however, with my large undergraduate classes I often set up formal channels (e.g., partnerships with the Education Students' Association and arriving to my lectures early and staying behind to chat with students). My research has also shown that developing a positive and trusting relationship with students increase their effort during the course and improve their academic achievement (**Chu & Fowler, 2020; Chu & Leighton, 2019**). Students have also indicated that they appreciate my effort to start these conversations. The feedback I have received from these conversations have also been used to revise my course design and improve my practice. In the end, my philosophy of developing a positive and trusting relationship with my students have benefitted me as well.

8) Collect feedback, engage in professional learning activities, and reflect on teaching, in order to strengthen their teaching practices and improve student learning: Professional Growth and Scholarship of Teaching and Learning (SoTL) Research.

As mentioned in the previous sections, I actively seek feedback from my students to improve my course design and teaching practice; but, I also consult and collaborate with my colleagues to enhance my approach to teaching. For example, I have asked colleagues from different departments (i.e., Dr. Leslie Reid when she was Associate Dean – Teaching and Learning in the Faculty of Science) to observe my teaching and provide me with feedback for improvement. I also took advantage of the University of Calgary's peer observation open classroom week so that I may watch other colleagues teach and reflect upon their practice in order to enhance my approaches. Additionally, I participate in the WSE Teaching Assistant (TA) Preparation Program in which graduate students interested in becoming a TA are welcome to observe my classes; I often discuss my teaching with these students as a way to collect more feedback that could be used to enhance my practice.

In WSE, I have had the privilege to collaborate with many colleagues, including students, on numerous research and teaching projects. I truly believe that teaching a course and conducting research within a course requires the efforts of a whole team. As such, I work closely with my colleagues to design and redesign courses as well as embed SoTLresearch within our courses so that we may continually improve our practice and share our lessons learned with other colleagues.

SoTL research is a formalized way for me to collect feedback regarding my course and learning task designs as well as information to enhance my teaching. I have actively integrated the results of three studies into my courses so that the feedback I receive from my students, through these research studies, may inform and enhance my teaching. First, the validation evidence of the IPP learning task was integrated into the EDUC 445 course and has informed the re-design of both that learning task and the course. Additionally, the results of that study (\$10,000 from WSE Office of Teaching and Learning) added to my professional growth as a

researcher by allowing me to disseminate my findings at various conferences and in different journals (**Chu**, Wilcox, Jones, & Young, submitted for review; Craig, Young, Jones, **Chu**, & Wilcox, 2018; Jones, **Chu**, & Young, 2017; Jones, Young, & **Chu**, 2017; Young, **Chu**, & Jones, 2017).

Second, results of my study (\$31,061 from UofC Taylor Institute for Teaching and Learning) that focuses on understanding how students conceptualize disability and inclusion using visual representations, such as drawings, to initiate discourse about students' assumptions and understandings is shaping the course content and delivery models of the EDUC 445 course. The goal is to shift from providing instruction to producing learning about inclusion. Rather than instructing students on what inclusion should look like, we promote student engagement with critically considering policies, curriculum, local contexts, and personal beliefs so that students may create their own knowledge of inclusion. This innovative approach to teaching as a form of research informs the EDUC 445 instructional team's approach because it provides us with a better understand of the impact of the learning environment on our students' ability to maximize their learning about disability and inclusion. The findings from this study have both informed the way I teach this course and advance the field of SoTL by providing literature regarding the use of representations as a way to understand how students integrate different resources to build their knowledge of inclusion (Ostrowski, **Chu**, Lock, and Takeuchi, 2019).

Third, the findings from my course delivery formats (i.e., face-to-face and online) study (\$6,500 from WSE Office of Teaching and Learning) were applied to the Winter 2020 EDUC 445 to enhance both the face-to-face and online formats of this course. For example, videos of lectures designed for the online students were identified by students in the face-to-face format as being useful because they provide opportunities for additional review of course materials. This study allowed my research team to better understand how resources designed for one format could be beneficial for the other.

One of the many different skills I have developed while working with my colleagues is leadership. To further develop my leadership skills, during Fall 2018, I took a Leadership and Project Management course through the Faculty of Continuing Education. During the course, I learned about my leadership and collaboration style. I have integrated the content knowledge I learned into my teaching practice. For example, I now set group and personal goals at the start of each course so that all my teaching assistants and laboratory instructors may reach their goals while working as a part of our instructional team.

Summary of Data from Student Feedback

Table 1

Summary of Mean USRI Scores in the Category of Overall Instruction Quality

Year	Term	Course Name and Number	Number of Students in Course/Percentage response on USRI	Mean Score in Overall Instruction (with comparator Faculty & Dept. means)	
				Faculty/Dept (/7)	Mai-Wan (/7)
2019	Winter	Individual Learning: Theories and Application (EDUC 445; L01)	202 (40.50%)	6.09	6.43*
		Individual Learning: Theories and Application (EDUC 445; L02)	146 (60.96%)	6.09	6.24*
2018	Winter	Individual Learning: Theories and Application (EDUC 445; L01)	228 (35.96%)	6.09	5.26

		Individual Learning: Theories and Application (EDUC 445; L02)	132 (70.45%)	6.09	5.08
2017	Fall	Research Methodology in Education (EDER 603 online; L06)	8 (25.00%)	5.68	7.00*
		Multivariate Design and Analysis (EDPS 618; L01)	13 (100.00%)	5.68	4.33
2017	Winter	Individual Learning: Theories and Application (EDUC 445; L01)	219 (42.01%)	6.17	6.04
		Individual Learning: Theories and Application (EDUC 445; L02)	290 (28.97%)	6.17	6.37*
2016	Winter	Research Methods and Advanced Research Methods (EDER 603.05/701.11; L01)	8 (25.00%)	5.90	4.50
		Special Topics in Educational Technology: Basic Statistics for Testing and Measurement (EDER 679.56 online; L01)	20 (55.00%)	5.90	4.18
2016	Winter	Individual Learning: Theories and Application (EDUC 445; L01)	311 (24.12%)	5.73	4.53
		Individual Learning: Theories and Application (EDUC 445; L02)	115 (26.09%)	5.73	5.70
2015	Fall	Research Methods and Advanced Research Methods (EDER 603.05/701.11; L01)	5 (100.00%)	6.11	5.00

* Man-Wai's mean USRI scores exceed the mean of the Werklund School of Education mean USRI scores

NOTE: Werklund School of Education has no department; hence, the faculty and department USRI means are the same

In my role at the UofC, I have developed and taught six different courses multiple times, all of which are listed in Table 1. Of the releasable USRI evaluations for the past four years, my current overall average is 5.66/7.00. The comments from my students indicate that I am generally an engaging lecturer, but I continually try to improve my teaching practice by enhancing my courses using the feedback provided to me. Two areas that I have focused on over the past four years are to increase the authenticity of the learning tasks and to better organize course content to improve flow. My students have noticed these changes, particularly in the undergraduate classes as their USRI ratings (5.12/7.00 during Winter 2016 [L01 & L02] to 6.34/7.00 during Winter 2019 [L01 & L02]) and students comments have shown that I have improved in this area over the past four years.

I am honoured that my efforts in teaching have been recognized by my peers. In 2019, I was the recipient of the Werklund School of Education Teaching Excellence Award. Additionally, my work with large undergraduate classes was recognized by undergraduate students when I received the 2017 University of Calgary Education Students' Association Teaching Award.

Student feedback on my teaching in the research methodology courses have helped me reflect upon my practice. For example, in my Fall 2017 graduate-level research methodology course (EDER 603), students commented about how the course's balanced workload increasing their enjoyment and motivation to learn. This feedback helped me realize the importance of a well-designed online course. Student comments also helped me understand the importance of tailoring the course for each student by helping them develop a research problem and

methodology for their own thesis projects. Since the students were trying to decide on their research problems and design a method that worked for their own projects, they were highly engaged with the course material so it was important to help them synthesize the course material into their own projects. Feedback from my Winter 2018 EDUC 445 students indicated a need to improve the marking structure that was designed to improve the reliability of team marking. Since receiving this feedback, I have worked on improving our marker reliability training sessions for my laboratory instructors and teaching assistants so that we may improve the reliability of our marking. In order to measure the success of our training sessions, I have also been calculating our inter-marker reliability to ensure we are high amongst our instructional team. Feedback is an important element of both my research and teaching practice. As such, I take always reflect upon the valuable feedback given to me so that I may use it formatively to improve my practice.

Reflective Summary Statement

During my past four and a half years here at the UofC, I have had the pleasure of teaching a variety of course content; large ($n=525$) and small ($n=3$) class sizes; undergraduate and graduate courses; and face-to-face and online delivery modes. This teaching dossier includes my teaching philosophy which elaborates on my commitment to three core principles that I utilize for all teaching that I do: graduate, undergraduate, or high school. First, is my commitment towards the use of *authentic assessments* because of their importance towards developing and applying the knowledge and skills that students will use beyond the course. Second, is my commitment towards the use of and how to best provide individualized *formative feedback* to improve student learning. Third, is my commitment towards building a *positive relationship* with my students so that they are more likely to trust and be receptive of my lessons and feedback. Additionally, I also explain the teaching strategies that I utilize in my courses which are guided by these three principles.

As a life-long learner, I understand that my development is ongoing and I hope to never lose my motivation to examine and refine my own practice. To this end, I have two goals for improving my teaching practice over the next few years. My first goal is to continually use students' and colleagues' feedback to improve my practice. I plan to use my students and colleagues' feedback to help me expand upon my interest of post-secondary education and to refine and enhance my practice. I hope to continually collect validation evidence/feedback to support the claims made from the learning tasks that I use in my courses to ensure they are authentic and psychometrically sound.

My second goal is to improve my role as an instructor in online courses. Although I have taken the Teaching Online Programs course, I still have a lot to learn in this area. I do not have much experience teaching online classes because each online course only has a few synchronous sessions. One strategy I have planned is to visit a few colleagues' virtual classrooms and ask them for advice to improve my online teaching practice. Hopefully, by watching my colleagues engage students in the online environment, I will learn some teaching techniques for my own virtual classrooms. Throughout my continued development as both an instructor and learner, I hope to build upon my strengths and improve my areas of weaknesses.

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