

Educational Leadership Dossier: Nicole Sandblom

1 Educational Leadership Philosophy Statement

Evolving into Educational Leadership

In 2007, I arrived back from leave and discovered that a leader had thought ahead to my moment of return by applying for \$30,000 of funding for teaching development (Graham 2007). Her vision provided these funds to deeply re-think the design of my course but also reshaped the overarching development in my career. At that moment, I was still too concerned about just keeping up with day-to-day workload, but, looking back, she encouraged my ability for thinking ahead to work beyond the confines of one course. This initiative also allowed me to start to make the course more sustainable for instructors, TAs, and students.

If you told me in my first months of my position that I would end up teaching one particular course nineteen times in the next sixteen years, I would have wept. From my vantage point now, I can see how the coordination and instruction of one course provided an opportunity to develop my educational leadership. Informed by my expertise in successfully designing and teaching courses, I **crafted** an informal leadership role, leading to a significant and sustained impact. This **informal leadership role** involved seeking out activities that aligned with my educational leadership philosophy and then led to the **formal educational leadership roles** of Interim Director and now the Director of the Natural Sciences Program and to being recognized by the Educational Leadership Award of Excellence, Faculty of Science, in December 2024.

Grounded in My Teaching Beliefs

My experience in teaching informed my ideas about leadership. My teaching philosophy emphasized these key questions:

1. What do my students need to learn?
2. How will I know if they have learned it?



To answer these questions, I think the essential component relates to **communication**.

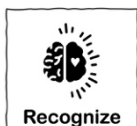
More recently, I think more carefully about the students who are different than me leading to expanding my philosophy to try and address that aspect of inclusion (Kenny et al. 2017). I **trust** students and aim to be trusted by them. Both of these themes of *communication* and *trust* tie into my fundamental beliefs for my educational leadership philosophy.



Developing My Leadership Beliefs



Leaders collaborate to build the leadership of others. A 2017 keynote by Johnston et al. and a 2018 workshop on Students as Creators, Drivers, Innovators and Collaborators, both at the UCalgary Conference on Postsecondary Learning & Teaching, encouraged me to re-examine my mentorship model - not as just a top-down approach, but that of a web. This approach now forces me to consider how much I learn from others on a regular basis regardless of our relative "ranks." By being open to collaboration, I am better able to encourage anyone I lead with open *communication*. They can *trust* me to support them when they take risks (Fields et al. 2019) in their own teaching practice. I practice this approach in my role as a facilitator various teaching development sessions, as Curriculum Review Lead, and as Director for the Natural Sciences Program.



Leaders recognize that they often lead and teach from a position of privilege. I experienced a transformational leadership moment in 2012. Based on a unique set of enrolment pressures, I needed to lead my largest teaching team ever while also teaching the course myself. The act of scaling up student numbers by a third revealed the challenge of *communication* in my efforts to keep grades equitable. There was little wiggle room to let instructors be truly autonomous in that environment; I needed to reign in anything contradictory without publicly blaming anyone. While I was not yet tenured, my position was tenure-track compared to most of the teaching team. When I look back, this moment shifted my perspective to demonstrate humility (Fields et al. 2019) and to see the potential in colleagues in more precarious academic positions. I now regularly *trust* and mentor these colleagues during their development of their teaching practice, and thus I can allow them the space to develop a learner-centred approach (Kenny et al. 2017) to restore and build equity. For another student-supporting equity initiative, I led an Open Educational Resources (OER) Pilot Project including undergraduate students to adapt and adopt an OER for first year engineering students taking CHEM209.



Leaders self-reflect to improve their work and model this step. I regularly consider my successes and areas for growth as well as ask students to formally reflect on their learning (McRae et al. 2018). In 2015, our TA team added an experienced TA who *communicated* his need for more independence while working with me. Unfortunately, independence did not align with the necessity of providing uniform grading and led to stressful moments with errors in the consistency of grading expectations and his work needing revision to reach an appropriate level of feedback. Three years later, I listened carefully to that TA describing the development of his thoughts about teaching during a keynote presentation for 2018 University of Calgary Conference on Postsecondary Teaching and Learning (Barrette-Ng et al. 2018). This remarkable event made me reflect on our interactions; in F18, I reinvented the role of TAs in the course by *trusting* in them. The Tutorial Teaching Team now collaborates and builds tutorials as the course proceeds. Life doesn't often offer a reset, but this particular TA asked to come back and teach the course with me again for his last semester as a graduate student. We both appreciated the experience. When I listen and reflect on feedback, I can improve my morale, and I can chart my progress as an educator and leader. These reflective practices connect to my research into reflection and feedback and my mentorship of colleagues.

Influencing with my Leadership

I mentor and coach colleagues, sessional instructors and graduate students. In Section 2.1, I outline my work in developing expertise in others for providing high-quality feedback for student writing as well as how I bring that work to a wider audience.

I share my resources and scholarship to influence other efforts in my Department, my Faculty, my University, and the Canadian Chemistry Education Research Community. In Section 2.2, I include evidence of these connections to the community. My efforts *enhance* the quality and breadth of learning experiences in the Natural Sciences Program and the Department of Chemistry, and I outline the resources I developed in Section 2.3.

I facilitate initiatives that encourage my colleagues to enhance their teaching practices I outline my contributions in Section 2.4 to Taylor Institute sessions and in Section 2.65 to the Quality Assurance Curriculum Review and the Chemical Society of Canada Accreditation.

2 Evidence for Impact of Contributions

The nature of my appointment forces me to stretch myself beyond my discipline. I hope that my students can also put the science they learn into the context of a wider scope. The growth and development of the Natural Sciences Program allowed me to develop ideas and methods to enhance my teaching and to strive for future progress in this process of learning. I find it exciting to continually study student learning and reiteratively apply what I learn to new endeavors in the classroom. In this section, I will describe how my **educational leadership philosophy** led to the **activities** in my leadership roles that:

- Impact learning at many levels
- Share teaching and curriculum development expertise
- Engage colleagues in enhancing their teaching practices
- Influence beyond my own teaching practice
- Demonstrate critical reflection on the effectiveness of teaching and learning
- Contribute to service at many levels



I mentor and coach colleagues, sessional instructors and graduate students.

2.1 Support for Early Career Educators in Science

I support many early career educators as they quickly develop expertise in working with student writing. Over the years, I worked with sessional instructors and many graduate students as Tutorial Teaching Assistants. Most graduate students comment that teaching SCIE311 vastly improves their own writing, indicating an **impact on the graduate student learning beyond the scope of their assistantship duties**. Tutorial Team meetings allowed me to consider TAs as Colleagues-in-Training (Arbach 2007) where I could reveal to TAs how **I self-reflect to improve my work and model this step**. These methods worked surprisingly well in a Zoom setting and all of our W21 TA meetings involved co-writing the TA-taught tutorials, as well as TA-scored instructions and rubrics, via a shared screen. By openly and honestly sharing areas where I still need to grow in these meetings, I provided a valuable **demonstration of critical reflection on the effectiveness of teaching and learning**.

While I have not taught and coordinated this course recently, in my role as Interim Director and Director of the Natural Sciences Program, I continue to support Coordinators as they develop their own educational leadership and guide TAs and Instructors. From a leadership position, I can use this expertise to impact more broadly early career educators at the University of Calgary so that they feel supported in their learning about teaching.

My most recent coordinator position involved first year chemistry labs and much larger teams of graduate teaching assistants. While opportunities for collaboration are fewer in these settings, I can still lead by encouraging supportive environments and growth as educators. This teaching assignment provided a key leadership where I could stretch myself to bring my experiences into the structured situation of large class sizes and larger teaching teams, often with TAs in their first teaching experiences.

“As a coordinator, I think you did a great job in meeting your aims for W25 TA training. I have learned even more from when I first taught in F24. You provided a **safe and welcoming environment** for us TAs to share our lab experiences, good and bad ones, and find ways to improve these experiences. I appreciate the moments when a suggestion or a concern was brought up, you considered them and took the initiative to address these concerns immediately. Being a TA for CHEM201 has definitely been a fun experience and I hope I get more opportunities like this!”

██████████. Graduate Student Teaching Assistant. CHEM201 F24 and W25 **Emphasis mine.**



I share my resources and scholarship to influence other efforts in my Department, my Faculty, my University, and the Canadian Chemistry Education Research Community.

2.2 Connections to a Wider Community of Scholarship

Much of my scholarly work involves unfunded studies. As a particular example, I would like to mention my 2013-2016 and 2018-2022 projects titled Evaluation of Learning Outcomes and Student Engagement in SCIE311. Building upon the successes of the 2007 re-design, we modified the major course assignments to allow students to develop a better appreciation of how scientific information is reported and cited in the literature. By carefully analyzing the data for the student voice, I could more fully **recognize that I often lead and teach from a position of privilege. This study made a significant and sustained impact on learning** as described by the student comments in our study. This scholarship as mentioned [REDACTED] led to an improved student experience as well as presentations at an international conference.

See **Nomination Letter** for more comments from [REDACTED]

"By integrating multiple perspectives, I was able to produce a product that I am very happy about. **Everyone has different opinions and sees different things**, so I really learned the importance of appreciating all the feedback I could get! Finally, I really learned how to interact with others to improve not only my writing but also theirs. **Although I have lots of experience with teamwork because I am a coach and former serious athlete, this class really helped me to refine my ability to critique others and take criticism from others.**"

Student feedback from our study revealed comments like this one (Addy et al. 2017)
Emphasis mine

"Nicole integrates scholarship into her teaching at nearly every opportunity"

[REDACTED], Natural Sciences Program, 2021.

My 2022 University of Calgary Teaching and Learning Grant (*Development and Innovation*) followed up on the unfunded work begun in 2018 to study the major redesign of SCIE311 (titled **Using Reflection and Feedback for Improving the Student Writing Experience in Science**). The grant funded three areas: studying student reflections as course work from F18-W21 and interviewing past students (modification to REB18-1303); interviewing past teaching assistants and sessional instructors (REB23-0760); sharing the findings as Open Educational Resources. This work is ongoing with a team of an undergraduate student, a graduate student, and a research assistant preparing papers about our findings. We shared our findings in a variety of venues: several Science Teaching Forums and at the 2023, 2024 & 2025 Conferences on Postsecondary Learning and Teaching.

"Before this experience, I viewed educational research as an abstract concept that mainly involved academics and unseen impact. However, **now I see it as a dynamic and vital field** that directly impacts classrooms and students' lives. **This project has shown me the tangible outcomes of educational research and has convinced me of its significance.** It has also solidified my commitment to pursuing a career that integrates research and teaching, as I believe this combination can lead to more effective and evidence-based educational practices."

[REDACTED]. Supervised for 2023 SSHRC Undergraduate Student Research Award. *Examining TA perspectives for supporting student scientific writing* **Emphasis mine.**

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My work improving my courses connects to scholarly efforts to **influence many colleagues in many venues beyond my own teaching practice**. I emphasize in my scholarly presentations how **I self-reflect to improve my work**. I am a collaborator with the *Canadian Consortium of Science Equity Scholars*, a SSHRC Partnership Development Grant for a national group of educators working to change systemic barriers to student success in science. In the years to come, the Faculty of Science and the wider Canadian science community will reap the benefits of the learnings about inclusivity and science “belongings”.

“[Nicole] took a chance on letting me work independently in my chosen field even though my transcripts at the time were TERRIBLE. I will always share what a difference it made to work on those independent projects with someone supportive and [who encouraged] exploration. Getting that email saying [she] was interested is what I look back to as the catalyst for everything positive I’ve done since.”

Student feedback W19

Because **I recognize that I often lead and teach from a position of privilege**, I aim to include students in the research experience even if they will never be my supervised graduate student. I supervise project students who plan to use the skills from their Science degree to move onto other programs, for example, BEd, OD, and DDS. In my interactions with these undergraduates, I can provide mentorship in navigating the university and its programs.

2.3 Resources for the Department of Chemistry and the Natural Sciences Program

In my grant application, I wrote: “From a variety of professional development and educational leadership experiences, I realize that colleagues in the Faculty of Science want their students to have stronger writing skills to communicate scientific ideas. These skills are in direct alignment with the Faculty of Science Graduate Attributes Framework (2015).” **I collaborate to build the leadership of others** and aim to **actively engage colleagues in enhancing their teaching practices**. For example, I developed a set of writing resources to share with teaching-stream faculty members involved in project courses for chemistry and more recently for NTSC colleagues. I continue to share a wide variety of resources with other educators with Creative Commons licensing: <https://bit.ly/SandblomSharingResources>

Student feedback helped me to recognize barriers faced by first-year students in CHEM209 and the challenges they face in transitioning to university-level study. Our students might be juggling financial pressures, working outside of school, and navigating programs as the first generation to attend university in their family. In 2017-2019, I applied for the Provost’s Open Educational Resource (OER) Pilot and lead our team to develop an OER textbook for use in CHEM209. OER resources provide an important step towards dismantling systemic barriers to education, particularly for students from low and middle-income backgrounds. We started using our OER textbook in W18, therefore over 5000 students saved well over \$500 000. Future development by colleagues expanded the OER to both CHEM201 and CHEM203 with about four thousand students each year since. In taking steps to **recognize that I teach from a position of privilege**, I champion development of resources to support students from diverse backgrounds. These connections provide a route so that **I collaborate to build the leadership of others** and connect to my efforts as Director to contribute to initiatives in the Faculty of Science.



I facilitate initiatives that encourage my colleagues to enhance their teaching practices.

2.4 Contributions to Taylor Institute Initiatives

I am invited to **share aspects of my teaching and curriculum development expertise** at the Taylor Institute of Teaching and Learning. I co-developed an Interactive Course Component titled *Using course road maps to improve student achievement of learning outcomes*. This component is included in the *Blended and Online Learning Pedagogy and Practice Course* as part of the *Academic Staff Certificate in University Teaching and Learning*. For Teaching Days 2021, I supported colleagues with a session titled *Active Learning in Blended and Online Learning Environments*. I recently shared my resources and ideas as a member of the 2024 Taylor Institute Series: Critical Reflection Panel Discussion.

2.5 Leadership for Quality Assurance Curriculum Review

In 2016, our Director prepared for a leave and needed to select someone to lead the formal Curriculum Review (CR) processes. Based on my informal leadership activities and deep familiarity with the NTSC Program, she invited me to be the Natural Sciences Program Curriculum Review Lead. In efforts **to make significant and sustained impacts on learning in our program**, I organized meetings, prepared an analysis and wrote findings. We submitted our Curriculum Review Report to the Associate Dean (Undergraduate) and I finalized the public report in June 2017 (Sandblom and Benoit 2017).

Based on the Action Items in our report, I applied for, and received, a grant from the *Seeding SoTL Initiative* from the Taylor Institute for Teaching and Learning. Because **I recognize that I often lead and teach from a position of privilege**, I know that Sessional Instructors are in a precarious position to contribute more widely to curriculum development. I wanted to support our experienced Sessional Instructor as a part of the Natural Sciences Program teaching community. I invited Éowyn Campbell, Sessional Instructor for SCIE311, to be a co-applicant and co-facilitator. We used these funds to support planning of an unconference (Sandblom 2017).

“Co-facilitating the TFDL unConference was such a **positive integrative experience**. I was able to see how active-learning techniques I’d been applying in the classroom were effective (and eye opening) for senior colleagues and it felt good to participate constructively in curriculum building for a program I’d been involved with for many years. I had participated in curriculum review discussions in Geoscience for the courses I’ve taught but had not had an opportunity to provide structure to curriculum reflections and facilitate creative discussions.

I am so grateful to work with Nicole, who **consistently devises opportunities for me to grow and expand** as an instructor.”

[REDACTED], 2012-2023.

In 2021, I joined the University Teaching and Learning Subcommittee of the Campus Mental Health Strategy aligning well with my beliefs about building *trust*. My experiences here infuse my work to **contribute to service at many levels** via Curriculum and Teaching Development committees in my Department as well as in the Faculty of Science Curriculum and Academic Review Committee and Science Undergraduate Leadership Community, and as Programs Representative for the Faculty of Science Executive Committee (2017-2021, 2023-2023) and Dean’s Advisory Council (2023-present) where I can bring my perspectives. For example, when **I recognize that I often lead and teach from a position of privilege**, I can integrate my understanding of student learning and student wellness with sharing my ideas about academic integrity processes and policies. These leadership experiences can also support my home Department of Chemistry by acting as the Accreditation Lead for Chemistry Programs and Honours Biochemistry Programs. Canadian Society for Chemistry (CSC), Chemical Institute of Canada.

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3 Reflective Summary for Future Growth as a Leader

That first fundamental shift in 2007 in course design led to a ripple effect throughout my other teaching and in the subsequent redesign efforts. In my *first steps as a leader*, I took these initial ideas and shared them widely. I interacted as a participant at workshops by sharing expertise and documents with colleagues, and later I facilitated and prepared activities for workshops.

For other *leadership growth* in sharing Scholarship of Teaching and Learning, my mentoring improves by my research interviewing graduate students and sessional instructors. In leading early career educators:

I plan that they appreciate the value of collaboration.

I plan that they act emphatically to those learners around them.

I plan that they can start from assuming best intent in leading others.

I plan that they are inspired to formally reflect as part of their work.

To continue to *develop as a leader*, I engage in professional development sessions like the 2021 Educational Leadership and Mentorship course at the Taylor Institute and the first cohort of the Academic Leadership Academy program: ULead from November 2023 to June 2024.

When considering my own goals for *future growth as a leader*, I wrote that I aim for “improving my conflict resolution skills so that I am less likely to avoid challenging conversations [and for] developing a better sense of where I can delegate or collaborate as part of my role.” The instructor for ULead, Dr. Cari Din, wrote that “Your genuine enthusiasm, tangible engagement, vivid contributions, commitment to doing each module’s deliberate skill practice, your concrete and helpful questions breathed life and learning into your ULead the Academy cohort this year.” I am confident that the deliberate practices from this course will continue to support my next steps in building my leadership skills.

What excites me today in my current role as the NTSC Program Director? I knew that in September 2024 we would begin the next Curriculum Review cycle, so I began planning in March and April 2024 by inviting colleagues to present a series of Lunch and Learns about the required courses in Natural Sciences Program. These sessions involved lively and thoughtful conversations about our teaching, and we continue to carry that momentum into our ongoing Curriculum Review meetings. These ideas now inform the formal process of bringing forward through university governance a proposal for Program Revitalization. I am excited and fascinated by our discussions during consultations for possible program improvements and look forward to welcoming students to our new future-focused degree program.

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Icons: <https://thenounproject.com>

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