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PSYNOPSIS

CANADA'S PSYCHOLOGY MAGAZINE

UNDERGRADUATE STUDENT SUCCESS

PSYNOPSIS

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Psynopsis is the official magazine of the Canadian Psychological Association. Its purpose is to bring the practice, study, and science of psychology to bear upon topics of concern and interest to the Canadian public. Each issue is themed and most often guest edited by a psychologist member of the CPA with expertise in the issue's theme. The magazine's goal isn't so much the transfer of knowledge from one psychologist to another, but the mobilization of psychological knowledge to partners, stakeholders, funders, decision-makers, and the public at large, all of whom have interest in the topical focus of the issue. Psychology is the study, practice, and science of how people think, feel, and behave. Be it human rights, healthcare innovation, climate change, or medical assistance in dying, how people think, feel, and behave is directly relevant to almost any issue, policy, funding decision, or regulation facing individuals, families, workplaces, and society.

Through *Psynopsis*, our hope is to inform discussion, decisions, and policies that affect the people of Canada. Each issue is shared openly with the public and specifically with government departments, funders, partners, and decision-makers whose work and interests, in a particular issue's focus, might be informed by psychologists' work. The CPA's organizational vision is a society that values and applies psychological science in the benefit of persons, communities, organizations, and peoples. *Psynopsis* is one important way that the CPA endeavours to realize this vision.

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THE OFFICIAL MAGAZINE OF THE CANADIAN PSYCHOLOGICAL ASSOCIATION

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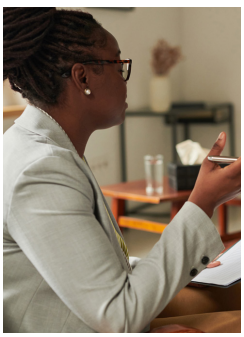

MESSAGE FROM THE GUEST EDITOR

Steven M. Smith, Ph.D.
President, CPA
Professor of Psychology, Saint Mary's University, Halifax, NS

There is little question that who ultimately becomes a psychologist or psychological researcher is strongly shaped by who completes an undergraduate degree in psychology. Nearly all graduate psychology programs in Canada aim to address the need for greater diversity within the discipline, yet undergraduate completion rates vary dramatically across institutions, ranging from under 50% to over 90%.[1] Canadian campuses are increasingly diverse, with more international students and growing representation from historically under-represented groups. However, substantial inequities persist. Non-Indigenous youth are twice as likely as Indigenous youth to pursue education beyond high school (72% versus 37%[2]). Black and Indigenous students are up to two to three times less likely to complete a bachelor's degree.[3] Students with disabilities and former youth in care also experience markedly lower completion rates.[4,5]

These disparities are compounded by mental health challenges that often emerge during the traditional university years.[6,7] Approximately one-third of Canadian university students rate their mental health as poor or very poor, and 70% report that mental health difficulties have negatively affected their academic performance.[8] Addressing inequities in psychology therefore requires attention not only to access, but also to persistence, well-being, and student success.

Transitions into postsecondary education are difficult, and the papers in this issue of *Psynopsis* highlight both the challenges students face and practical strategies for addressing them. Bouillard et al. emphasize the importance of promoting racial justice and outline ways clinical psychology programs can contribute to this goal. Increasing diversity at all levels of education is a critical part of this effort.

Several contributions provide concrete, replicable approaches to supporting students. Katelynn Carter-Rogers introduces the "Balance Check", an in-class activity designed to foster safety, reciprocity, and actionable goal setting. This flexible tool can help students reflect on their academic and personal demands as they transition into postsecondary education. Rasel Babu and Adam Dubé present a case study from Bangladesh during the COVID-19 pandemic, when students were forced to study remotely with limited technological resources. Their findings have broad relevance for students facing financial insecurity, limited access to technology, or inadequate broadband infrastructure.

Mia Leedell describes Psych Connect, a networking initiative that helps students explore career pathways by connecting with professionals working in psychology. This model is easily transferable across institutions. Shamnaz Arifin Mim focuses on students' sense of place, encouraging instructors to recognize how implicit hierarchies and positionality shape teaching and learning. Making these structures visible benefits both students and instructors. Finally, Nestar Russell, Jasmine Teed, and Nazario Robles Bastida offer an engaging, pedagogically focused classroom strategy that can be readily adopted by others.

Ultimately, students who feel engaged, understood, and that they belong are more likely to succeed and persist in postsecondary education. Collectively, the contributions to this issue of *Psynopsis* provide practical guidance for supporting undergraduate students while valuing their individuality. Strengthening these approaches to undergraduate student success will not only improve student outcomes, but also help ensure that the field of psychology becomes more representative of the populations it serves.

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MESSAGE FROM THE CEO

Lisa Votta-Bleeker, Ph.D.
CEO, CPA, and Editor-in-Chief, *Psynopsis* , Ottawa, ON

Welcome to Volume 48, No. 1 of *Psynopsis*, on Undergraduate Student Success. A special thanks to Dr. Steven Smith, CPA President, for his oversight of this issue as Guest Editor.

Students represent a significant and valued cornerstone of the CPA as an association, and of our profession and discipline. Quite simply, they represent the next generation of psychologists, psychological scientists, and educators. As they embark on their career paths in psychology, students bring their own life experiences, expectations, hopes, concerns, and innovations. Challenges to human rights, educational infrastructure, research funding, and training standards have left students grappling with so many questions, including what they know, want, and think about their academic path and careers. Consequently, supporting their success across all stages of their academic career is more critical than ever.

Numerous initiatives in schools and universities across the country have demonstrated that fostering student success and engagement requires a multifaceted approach that focuses on balancing academic rigour and progress with personal well-being, mentorship, and community connectedness. Accomplishing this balance can include:

- Establishing positive relationships with supervisors and/or mentors who encourage constructive feedback, set clear expectations, and facilitate discussions around academic progress, challenges, and opportunities
- Searching for opportunities for academic and professional development related to a student's research and coursework
- Finding ways to feel connected with the academic community through collaborations, social events, and ensuring students' voices are heard
- Leveraging the vast skill set that comes with a psychology degree to explore and plan for various career paths
- Recognizing the importance of supporting students from all backgrounds and ensuring that student supports work for everyone
- Setting boundaries to achieve a work-life balance that maintains an ongoing connection to friends and family; recognizing when help is needed and learning how to find it; spotting warning signs to prevent problems before they occur; and establishing ways to deal with those problems as they arise

To this end, the CPA, the CPA's Section for Students, and other Sections all recognize the importance of supporting students in various ways. Whether through the campus representative program, convention offerings, mentorship programs, career fairs, research grants, publishing opportunities, leadership development opportunities, workshops, bursaries, and awards, the CPA is working to create structures that encourage student engagement and connectedness, which are the cornerstones of student belongingness and, in turn, student success.

The articles in this issue address many ways that student success can be impacted. Ultimately, they show that acknowledging, understanding, and supporting the needs of students across their academic careers makes their success more likely. In this way, we hope to do all we can to empower the next generation of psychology's health providers, researchers, and educators.

IN MEMORIAM

PASSING OF DR. SANDRA PYKE

We were deeply saddened to learn of the passing of Dr. Sandra Pyke. A trailblazing feminist psychologist with a respected and admired professional career, Dr. Pyke served as President of the CPA (1981-82) and later received the CPA's Award for Distinguished Contributions to Canadian Psychology (1996) and the CPA's Distinguished Lifetime Service Award (2008). She was a CPA Fellow and a co-founder of both the CPA's Section for Women and Psychology (SWAP) and the Section for Psychologists and Retirement (SPAR). She will be deeply missed by all who knew her and all who followed in her enormous footsteps.

https://feministvoices.com/profiles/sandra-pyke

PASSING OF DR. CANNIE STARK

The CPA was deeply saddened to learn of the passing of Dr. Cannie Stark, CPA Past President (1991-1992) and Fellow (Dr. Cannie STARK Obituary | Regina Leader Post Remembering.

Dr. Stark was a Professor Emerita at the University of Regina, where she was a former head of the department. (She later retired to Montreal.)

She was a passionate and charismatic scholar, teacher, and pioneer in the field of the Psychology of Women, having published extensively in all these areas. A co-founder and long-standing member of the CPA's Section for Women and Psychology (SWAP), she was recognized with the SWAP Distinguished Member Award in 1995. Among her many distinctions, Dr. Stark was also the longest-serving member of the CPA's Committee on Ethics, joining the committee at its inception in 1983 and serving until her passing.

Dr. Stark has left a strong legacy in the fields of psychology, ethics, and social justice for her colleagues to embrace and build upon. She will be deeply missed.

PASSING OF DR. CAROLE SINCLAIR

The CPA was deeply saddened to learn of the passing of Dr. Carole Sinclair on February 28, 2026 (https://www.catholic-cemeteries.ca/obituary/dr-carole-sinclair/). Dr. Sinclair was a clinical psychologist who served as Director of Treatment Services at the Hincks-Dellcrest Centre.

A visionary and influential leader in professional ethics, she was a primary architect of the *Canadian Code of Ethics for Psychologists* and the *Companion Manual to the Code of Ethics*. She also served for many years as Chair of the CPA's Committee on Ethics and was an instructor for the CPA's online course on being an ethical psychologist. Dr. Sinclair made significant contributions to the CPA in many capacities, including as a Director on the CPA's Board and through her work with CPA Sections. While serving on the Board as Chair of the Committee on Sections, she developed the first iteration of the Section Operations Manual in May 1993. A Fellow of the CPA, Dr. Sinclair was also a past recipient of the CPA's Member of the Year Award. In 2016, her lifelong commitment to the field was recognized with the CPA's Gold Medal Award for Distinguished Lifetime Contributions—the highest honour bestowed by her peers.

The CPA extends its deep sympathy to Dr. Sinclair's family, friends, students, and colleagues. Her legacy will live on through the generations of colleagues, students, and interns whose ethical understanding and skills she helped shape.

BALANCE CHECK: RELATIONAL PRACTICE FOR EARLY COURSE-CORRECTION

Katelynn Carter-Rogers, Ph.D., Assistant Professor, Department of Management,
St. Francis Xavier University, Antigonish, NS

The Balance Check is a brief classroom routine that creates safety, reciprocity, and early course-correction for all students, not only those who are already in distress. Implemented in the first week of class (and before midterms), it combines self-location practices, trauma-informed pedagogy, universal design, and behavioural science "nudges" into a 20-minute, in-class activity.

The framework behind the Balance Check

In my broader work on kincentric spirituality in higher education, my colleagues and I describe a praxis of trauma-informed intersectional love: a way of teaching that recognizes trauma, names overlapping systems of oppression, and centres accountable care in classrooms.[1] This praxis is grounded in kincentric thinking (seeing students as embedded in relations with land, family, and community), spiritual holism (engaging mind, heart, body, and spirit), and rematriation (returning to Indigenous values of care and responsibility). It is enacted through practices such as relational accountability (being answerable to the classroom community), compassionate self-inquiry (noticing our own limits and positionality), and critical collective curiosity (asking together how structures, not just individuals, produce harm).
The Balance Check is one small way this praxis shows up in the classroom.

Relational grounding and self-location

In Indigenous relational approaches, we begin with relationships and responsibilities: to people, to place, and to the ethical space between us. Building on calls for Indigenous scholars to put ourselves forward and explicitly self-locate in our work,[2,3] I open my course with a Balance Check by briefly situating myself in relation to students, land, and institutional role. While doing this, they learn who I am, and what I am trying to balance. I name the tensions I am navigating and model a small, concrete step I will take for my own balance that week. This self-location signals that I am also accountable to the course community, that support is reciprocal, and that students' struggles happen.

Why a Balance Check?

Each September I meet motivated students who are also quietly overwhelmed by new routines, shifts in culture and climate, and the complexity of university systems. Many wait until midterm to ask for help. The Balance Check is designed to interrupt that pattern. Instead of treating support as an individual remediation strategy for "at-risk" students, this routine assumes that everyone is balancing multiple roles and that balance will shift across the term. It also assumes that help-seeking is more likely when the environment is predictable, relationally safe, and choices are clearly laid out.

The Balance Check is structured as follows:

1. **Framing and regulation**
   I introduce the activity as a check-in: students control what they share and whether they request follow-up.
2. **Self-location and reciprocal commitment**
   I briefly self-locate and name one small step I will take that week (e.g., blocking two 30-minute writing sessions). This models vulnerability with boundaries and normalizes adjustment.
3. **Balance Check**
   Students complete a one-page form that invites them to use a green/amber/red rating for different domains relative to the course. Students identify one next step that can be completed in 30 minutes (e.g., booking a writing centre appointment). Optionally, they request follow-up from campus supports.
4. **Mapping supports**
   I briefly describe available services without acronyms and clarify what students can expect.
5. **Anonymous feedback and adjustments**
   The form includes space for anonymous course suggestions. I commit to making at least one visible change and name this explicitly in class. This signals that feedback leads to concrete action, not only surveillance.

We repeat the Balance Check around Week 6, acknowledging that balance is dynamic and that students' needs evolve as the term unfolds.

Design principles: Equity-centred and trauma-informed

Features are intentional:

- **Indigenous relational grounding**
  The routine is anchored in relational accountability: students are invited to signal supports they would find culturally safe and to identify people they would trust to contact them. All available supports on campus are listed for them. We also learn if there are resources that are needed but not available.
- **Trauma-informed structure**
  Choice, predictability, and control are built in. The activity is invitational rather than diagnostic; students decide which domains to rate, how much to disclose, and whether to include contact information. The tone is non-judgmental and oriented toward practical next steps rather than deficit labels.
- **Universal design rather than triage**
  Every student completes the same brief check-in. This universal approach reduces stigma: the thriving student fine-tunes; the struggling student locates a pathway without being singled out.
- **Behavioural science in practice**
  Students are asked to translate a general intention ("I should get help") into a concrete action that can be done within 30 minutes. This shows that small commitments and implementation-intention style prompts increase follow-through.
- **Privacy, consent, and warm handoffs**
  By default, forms are anonymous. Only students who opt-in provide contact information, with a clear statement about who will see it and for what purpose. I aim for same-day attention to safety or basic-needs concerns and 48-hour outreach for others, copying the student on any email connecting them to a service so they remain central to the conversation.

Conclusion

The Balance Check is simple: a short routine that invites students to pause, self-assess, and take steps toward balance, while the instructor commits to reciprocal adjustment. Grounded in Indigenous relational and self-location practices and informed by trauma-informed and universal design principles, it offers a way to normalize help-seeking and make invisible pressures visible early enough for meaningful course-correction, for students and for the course itself.

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BALANCE CHECK

Course workload & expectations (readings, assignments, tests)	**How is this for you right now?** Green / Amber / Red
Belonging & peer connection (feeling like you fit, people to work with)	Green / Amber / Red
Finances, work & time (money, work hours, time to study)	Green / Amber / Red
Health & care (physical health, mental health, rest, caregiving)	Green / Amber / Red
Housing, tech & access (stable housing, Wi-Fi/device, getting to campus)	Green / Amber / Red
Motivation & energy (focus, interest, feeling hopeful about the term)	Green / Amber / Red
Pick one thing you could do in the next week that would help your balance:	My one small step: _____

This step is mainly about:
☐ Understanding the course better
☐ Studying / assignments
☐ Time management / organization
☐ Finances or work hours
☐ Health / wellness
☐ Housing / tech / access
☐ Belonging / connection
☐ Something else: _____

You only fill this out if you want contact. If you leave this blank, your form stays anonymous. I would like follow-up from (check any): (These would be specific to your own institution) ☐ My course instructor ☐ Teaching assistant (TA) ☐ Student Services ☐ Accessibility Services ☐ Counselling / Wellness ☐ Elders-in-Residence ☐ Academic Advising ☐ Peer mentor / student leader ☐ Other: _____	Students can provide the best way to contact them. _____ Is there anything specific you'd like us to know before we reach out?

EXPLORING RACIAL JUSTICE IN CLINICAL PSYCHOLOGY EDUCATION: PERSPECTIVES OF CANADIAN GRADUATE STUDENTS

Margaux Bouillard, Clinical Development Neuropsychology Master's Student, York University, North York, ON

Debra Torok, PhD Candidate; **Fanie Collardeau**, PhD; **Drexler Ortiz**, PhD, R.Psych, Clinical Lifespan Psychology, University of Victoria, Victoria, BC

Cara Samuel, PhD, R.Psych, Co-Founder, Turning Tides Mental Health & Consultation, Masset, BC, and Critical Health & Social Action Lab, University of Toronto, Toronto ON

Tasmia Hai, PhD, C.Psych, Assistant Professor, Department of Psychology, University of Manitoba, Winnipeg, MB

What are clinical psychology programs across Canada doing and changing to better support and promote racial justice? This is a common question raised by clinical psychology graduate students following the murder of George Floyd.[1] National conversation on diversity and racism has grown, sparking essential dialogues within psychology departments.[2] In order to understand the landscape of professional psychology programs in Canada, clinical psychology graduate students partnered to launch a survey to: (1) better understand the racial justice initiatives undertaken by Canadian graduate clinical psychology programs before and after the murder of George Floyd, (2) explore the perspectives and experiences of discrimination among Indigenous, Black and People of Colour (IBPOC), including mixed-race/multiracial students, and (3) examine the perceptions and engagement of white trainees in racial justice efforts. The larger aim of this project was to provide recommendations for integrating racial justice into clinical psychology programs across Canada to better support student success and foster more equitable training environments.

A mixed-methods approach was used to explore students' experiences and perceptions. IBPOC participants completed the Everyday Discrimination Scale[3] and Racial Micro-Aggressions Scale.[4] A total of 105 students completed the surveys between May 2021 and 2022, with 90% currently enrolled in a master's or PhD program in clinical psychology and 10% having graduated from such a program within the past five years. Participants were distributed as follows across Canada: British Columbia (26.7%), the Prairies (21%), Ontario (17.1%), Quebec (11.4%), and the Atlantic provinces (23.8%). Overall, 37% of the students identified as IBPOC, and among them,

74% reported not being white-presenting. Additionally, 7% were temporary residents in Canada, and 63% identified as first-generation graduate students.

The results were deeply concerning: 91.9% of IBPOC students reported experiences with interpersonal racism within their program. Over 50% of IBPOC participants reported being treated with less courtesy, respect, and as less intelligent. They reported receiving poorer support, as well as inappropriate, offensive, or overly personal questions. Further, all IBPOC students reported at least one experience of microaggression. The most common microaggressions consisted of environmental invalidations,[4] including: being the only person of their racial background in classes or workplace (86.1%), noticing few role models of the same racial background in their field (86.1%), interacting with authority figures from different racial backgrounds (80.6%), and seeing few peers of their racial background in their institutions (61.8%). Regarding program offerings, 23% of students reported that their program required courses in multicultural psychology, and 19.1% reported formal evaluation of their cultural competence.

A thematic analysis of open-ended responses added important context. While both IBPOC and white students reported that topics related to race and racial discrimination were sometimes formally addressed or assessed in relevant coursework, many expressed that these efforts felt superficial or insufficient.

One student noted:

"Discussions around culture and cultural humility feel like a checkbox in our program."

Another added:

"We are not evaluated on our awareness of issues around race and racial discrimination. We are, however, evaluated in the area of 'cultural competence.'"

IBPOC students in particular emphasized that the training was limited and lacked depth, meaning, and subsequent action. There was a notable perception that programs offered racial justice-related education performatively, especially since it was not mandated.

Despite these challenges, students demonstrated initiative to push for change. One student described creating a practicum placement on their family's reserve because there were no existing placements that focused on Indigenous communities. Another shared how they organized their own anti-racism series to explore ways to address anti-racism within different areas of psychology. Some students observed minor changes following these initiatives in faculty, such as increased attention from committees and offers of compassion and solidarity.

The Canadian Psychological Association (CPA) has recognized these gaps in the profession and updated standards accordingly. The new CPA Accreditation Standards (2023) integrate Equity, Diversity, and Inclusion (EDI) across all aspects of training by establishing EDI, social justice, human rights, and Indigenous reconciliation as core values. EDI considerations are required to be embedded into training program structure, curriculum, recruitment, and evaluation and expanding competencies related to cultural and individual diversity. These revisions position EDI and racial justice as a continuous priority in professional psychology education.

The literature offers several recommendations for implementing these standards to improve equity in education, a factor critical to student success. Clinical psychology programs should implement mandatory coursework on systemic racism and structural competence.[5] Curricula should also be regularly updated to integrate diverse cultural perspectives and address colonial legacies in psychological practice.[6] Further, establishing monitoring procedures, implementing cultural climate surveys, and using departmental meetings to publicly share progress on diversity initiatives could each promote transparency and accountability within programs and help students feel more supported.[7]

The study findings revealed concerning gaps in clinical psychology training in Canada, with IBPOC students reporting frequent discrimination and limited confidence in their programs' racial justice efforts. These concerns are especially urgent given the recent climate in the United States, where lawmakers have blocked universities and other organizations from having EDI programs, potentially undermining the well-being of clinical psychology programs.[8] The results of this survey underscore that, while progress has been made, substantial work remains to ensure that clinical psychology training in Canada truly embodies equity, inclusion, the benefits of organizational diversity, and support for student success.

Acknowledgement: The authors would like to thank the participants who completed the survey and provided their feedback. We would also like to thank Drs. Sara Pishdadian, Lauryn Vander Molen, Christiane Whitehouse, and Julie Wershler for their support with this work.

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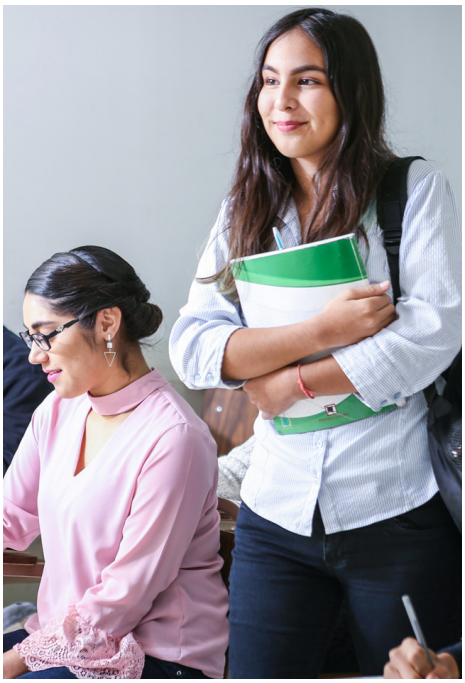

In 2024–2025, I taught two undergraduate courses in elementary science education at a Canadian university. It was a transformative experience, professionally and personally. As a woman of colour and a science educator from the Global South, I entered the classroom carrying layered identities shaped by histories and pedagogies from a context where science is often perceived as rigid,[1] especially for girls.[2] In much of the Global South, science education is exam-driven and resource-limited.[3] Yet, within these constraints, often felt more by women, science is practiced with resilience and relationality.[4]

I arrived in Canada holding both the structural challenges of my home context, and the hope that teaching across worlds could invite exchange. As a doctoral candidate in a Canadian University, committed to social justice in science education, I continually ask how teaching in the Global North raises questions of epistemic authority, whose knowledge is valued, whose voices are heard, and who is included in the narrative of science.[5] These questions are central to my teaching, echoing feminist critiques like Mohanty's,[6] which expose how global hierarchies shape knowledge. I felt these dynamics in my presence in the classroom.

The courses I taught prepared pre-service teachers for elementary science instruction. I used the 5E model:[7] Engage, Explore, Explain, Elaborate, Evaluate, to promote curiosity and collaboration. Though well-established in Western science education, I recontextualized it through my own experiences in resource-limited settings. Sharing these stories encouraged students to reflect on how classrooms can stay culturally relevant even with limited materials. This surfaced productive tensions between established pedagogies and the realities of teaching in diverse sociocultural spaces.

In the first term, I began to see how my identity as a science educator shaped the pedagogical choices I made.[8] The challenge, however, was that some students found the inquiry-driven approach unfamiliar, partly because some expected a more traditional structure, where theory is taught first and practice follows, with science content and pedagogy addressed separately. Instead, this course blended both, requiring them to wear the hats of students and future teachers simultaneously. This approach gently challenged their assumptions and invited a more integrated understanding of science teaching.

Although students described the class as enjoyable in their mid-term review, their feedback revealed helpful concerns. They were uncertain about how to balance fun with academic rigor, and some questioned their scientific competence and ability to perform as teachers. For me, this was a pivotal moment of reflection. Pedagogical change can be unsettling, especially when it invites emotional and intellectual engagement rather than passive absorption. Drawing on Zembylas's work on emotion and teacher identity,[9] I began to see uncertainty not as resistance, but as a site for growth.

TO BE SEEN IN SCIENCE CLASSROOMS: TEACHING THROUGH RECOGNITION AND RELATIONAL PEDAGOGY

Shamnaz Arifin Mim, MEd, MA, PhD Candidate, Department of Integrated Studies in Education, McGill University, Montréal, QC

I responded by offering clearer scaffolding and facilitating open discussions about what it means to "learn by doing". Engaging directly with phenomena, asking questions, and constructing understanding through action are essential not only for students but also for teachers, whose identities as learners shape their pedagogy.

By the second course, while students rarely verbalized the importance of representation, I became increasingly aware of how my own positionality, as a woman of colour teaching science, was part of the learning environment.[10] The class included a mix of students from other sections of the first course. I observed the returning students closely and found that they began engaging more confidently, experimenting with ideas, questioning assumptions, and reflecting on their evolving science identities.[8]

My presence invited different forms of engagement and visibility. For example, during Ramadan, two Muslim students openly shared their needs and practices, prompting thoughtful discussions on inclusivity and respect. Similar moments emerged as students from varied cultural and linguistic backgrounds expressed appreciation for the sense of belonging[11] that developed over time. These interactions did not privilege particular identities but deepened our shared understanding of how learning spaces are shaped by empathy and recognition.[12] Together, we co-constructed a space where everyone could see themselves as capable contributors to science education in this context.

Avraamidou's framing of science identity as a process of recognition[12] deeply resonated with me. In moments where students valued my relational[13] approach, and I acknowledged their openness. I experienced empathy as pedagogy, an exchange that affirmed our shared presence in the classroom. Our lively, messy lab became a space where learning was both intellectually and emotionally alive. This "messiness"[14] was the texture of authentic inquiry, shaped by collaboration and care. What unfolded was not a sudden transformation, but a slow, relational shift toward a more humanized approach to science education. Through subtle reflections, students recognized the significance of drawing a scientist on the first day, stepping outside for scavenger hunts, and engaging with critical feedback, not as isolated tasks, but as invitations to rethink what it means to learn and teach science. These realizations affirmed that meaningful science education extends beyond content; it involves cultivating curiosity, empathy, and belonging.

My experiences call us to listen across worlds, to teach from our identities, and to recognize that how we teach to teach is inseparable from how we understand learning itself. In this shared space, I felt seen, and I saw my students more clearly too. Recognition became a mutual act, one that helped us co-construct a classroom where science could be felt, questioned, and reimagined. I learned that attending to students' affective needs supports learning and reshapes how we think about teaching itself, what to teach, how to teach, and sometimes, how not to teach.

Acknowledgement: I am grateful to Emily Sprowls for being an amazing colleague and for the many insights into science pedagogy she has shared with me. I would also like to sincerely thank Dr. Allison Gonsalves for believing in me and for helping me build confidence in both my teaching and research.

Considerations for cultivating relational science teaching:

- **Begin with an invitation to explore science identity.**

Activities like drawing a scientist or sharing a memory can open space for learners' experiences to surface.

- **Offer a simple phenomenon to explore.**

Everyday materials may spark curiosity and allow inquiry to emerge naturally.

- **Let learners experience the activity as learners first.**

Moments of wondering or uncertainty can become resources for later reflection on teaching.

- **Pause briefly to reflect.**

Gentle prompts about participation, comfort, or uncertainty may deepen awareness of how identity shapes learning.

- **Attend to varied needs as they arise.**

Responding to cultural, linguistic, or personal considerations might help cultivate a sense of belonging.

- **Welcome the "messiness" of inquiry.**

Unexpected moments can become sites of shared meaning-making.

- **Make room for recognition.**

Noticing learners' ideas, risks, or insights may help them feel seen within the science classroom.

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BRICKS TO CLICKS: BARRIERS OF EMERGENCY ONLINE LEARNING IN LOW-INCOME CONTEXTS

Rasel Babu, PhD Candidate; **Adam Dubé,** PhD, Associate Professor, Learning Sciences, Department of Educational and Counselling Psychology, Faculty of Education, McGill University, Montreal, QC

Emergency online learning has been a viable solution during critical situations, including the COVID-19 pandemic, when universities across the globe had no choice but to shut down indefinitely in seemingly endless uncertainty. Developed nations had difficulties, but were relatively able to shift teaching/learning online.[1] However, stories from developing countries (e.g., the Global South) were starkly different, marked by stress, misunderstanding, uncertainty, and a digital divide that exposed deep-rooted inequities.[2]

We examined how emergency online learning during COVID-19 disrupted Bangladeshi undergraduate students' success, reflecting the challenges of low-income learners worldwide. Barriers, including limited technology access, poor connectivity, and socio-cultural constraints, not only affected learners' engagement but also their mental health. This work extends beyond Bangladesh by highlighting how the barriers, and strategies to overcome them, apply broadly to under-resourced students around the globe.

Bangladesh had limited plans for educating in an emergency. Universities closed with little warning, and guidance from authorities was virtually non-existent. Days later, institutions

scrambled to launch online classes, ushering in what we now call the "brick-to-click" revolution (i.e., from physical to virtual classrooms). For professors and students alike, this was uncharted territory. Few professors had prior experience with virtual classrooms,[2-5] and the technical skills demanded of students were worlds apart from their usual video calls on WhatsApp or Facebook Messenger.[6]

The emergency online learning context revealed that access to technology was a major concern for students of lower socioeconomic status.[7-11] While most faculty owned laptops and could afford internet, students had difficulties accessing and managing laptops and internet. Therefore, in addition to being compounded with insufficient policy and institutional guidelines, professors' challenges in teaching online began with learners' low or no access to technology. Another hurdle was society's negative perception of online learning (e.g., anything online, whether shopping or teaching, is something wrong). It represented an overall societal mistrust of online platforms, creating significant challenges for acceptance of online learning.[12]

To participate online, learners relied on low-end smartphones, ill-suited for Google Classroom or Zoom. Laptops were rare. Therefore, the requisite online space they needed was unavailable for many students. Female students faced further challenges, as families prioritized their male children's education. In cases of a shared laptop and similar class schedules, parents privileged their son's access.[12] While many students at least had access to a suboptimal device, they could not make full use of it due to excessive internet cost.[2] Being students, they did not have a significant income and mostly depended on parental support; but due to the pandemic, numerous parents lost jobs, upending the bread-and-butter arrangement of the family. As a result, the expense of an education became a luxury many families could ill afford.[2]

In addition to costly connectivity, poor connectivity was a major obstacle to online learning. As internet usage surged, speeds dropped. Rural students bore the brunt, often trekking to open fields for a signal, disobeying social distancing policy just to attend class.[2] Home environments offered little respite; cramped spaces and large families made concentration nearly impossible.[2,10] Many students felt embarrassed to show up on camera due to poor home set-up and furniture.[12] Additionally, lack of digital literacy and the learning experience became a minefield of frustration.[6]

To operate online classes, professors faced numerous challenges due to students' insufficient access to technology, technology skills, and family support. Students who could not attend classes regularly or experienced frequent disruption because of inadequate access to technology lagged in achieving curricular competencies. This created a critical mass for professors trying to design online instruction and assessment strategies.[11,13-15] Professors felt that the existing curriculum was not appropriate for online assessment. Furthermore, their lack of preparedness for this alternative teaching approach[2-5] created disengagement across online sessions,[16] and many students reported that professors taught far better in an in-person classroom.[2]

Students' dissatisfaction with the online teaching approach quickly became apparent. For example, some professors delivered hour-long lectures in online classes, which was mind-numbing for university students and likely contributed to disengagement.[17-19] Students expected peer interaction in the learning process through breakout rooms,[16,19] whereas professors were unaware of using breakout rooms, resulting in disengagement.

Beyond academics, the pandemic inflicted emotional scars. Students mourned loved ones, battled anxiety, and questioned the fairness of performance assessments during such turmoil.[2] This posed extreme challenges for professors designing instruction, as they needed to continue the course to avoid learning loss and simultaneously deal with students' challenges compassionately.

Challenges faced by all students during COVID-19 persist for low-income learners and many international students, particularly in Canada, who experience similar cost, access, and support gaps. Barriers did not end with the pandemic; they simply shifted back into the shadows whenever courses or services moved online. For equitable online learning across contexts like Bangladesh and Canada, the key priority is reliable access to devices and broadband for students and instructors. Alongside low or no-interest student loans for essential equipment,[20] universities should partner with communities, non-governmental organizations, charities, EdTech, and internet providers to offer means-tested device lending, data subsidies, and campus–community access points that serve domestic and international students alike. Faculty and students' training must integrate digital skills with pedagogy,[20,21] including culturally responsive support for newcomers. Finally, national and institutional policies should explicitly plan for education in emergencies, determining minimum access standards, flexible assessment, and coordinated supports so that online teaching–learning is resilient, inclusive, and effective for students' success.

FOR A COMPLETE LIST OF REFERENCES, PLEASE GO TO CPA.CA/PSYNOPSIS

ENHANCING SCHOLARLY CREATIVITY WHEN DEVELOPING RESEARCH IDEAS: A NEW STUDY

Nestar Russell, PhD, Associate Professor of Teaching; **Jasmine S. Teed,** PURE Award Student Researcher; **Nazario Robles Bastida,** PhD, Assistant Professor of Teaching, Department of Sociology, University of Calgary, Calgary, AB

How do introductory social science methods textbooks suggest students generate research ideas? And how does this advice compare to how a high-profile scholar – specifically, social psychologist Stanley Milgram – invented high-impact research ideas? We addressed these two questions in our above titled article, which was published in the December 2025 issue of the journal *Creative Education*: https://www.scirp.org/journal/paperinformation?paperid=148237

For the first question, we reviewed 17 popular social science research methods textbooks, with 13 (76.5%) offering advice on how to create research ideas. The five most frequently recommended techniques included:

1. Identifying, then drawing on a personal everyday life experience, observation, or applied problem, then developing a research idea from it (9/13; 69.2%).
2. Reviewing the previous literature in a general area of interest with the intention of exploiting observed gaps in the knowledge base (8/13; 61.5%).

3. Reviewing a particular current event, like a controversial public debate or policy issue, then developing a research idea from it (8/13; 61.5%).
4. Reviewing the previous literature in an area of interest, then adopting other authors' suggestions for potential future research (7/13; 53.9%).
5. Reviewing the previous literature in a general area of interest with the intention of identifying, then testing the validity of a theory (4/13; 30.8%).

Despite the 13 textbooks promoting a wide range of creative techniques, most (11 out of 13 or 84.6%) mentioned what we termed a "textbook golden research rule": when inventing a research idea, researchers should review the previous specialist literature before deciding on their research methodology. So how did the textbook advice compare with how Stanley Milgram typically invented research ideas? Before revealing this information, it's important we justify his selection as our creative exemplar case study.

Milgram is most (in)famously remembered as the inventor of the Obedience Studies, a set of experiments which one scathing critic conceded were "devilishly ingenious, cleverly thought out, and – whatever one thinks of them – extremely provocative and probably important".[1] This simultaneously unethical yet intriguing research is, due to both descriptors, one of the most widely cited studies in the social sciences. Although Milgram is, as the ethics chapter in most methodology textbooks argue, the poster boy of how not to do research(!), he was selected as our single exemplar case study for two reasons. First, we argue Milgram's culpability for having undertaken an indisputably unethical study offers no logical rationale for eschewing an analysis of his wider creative talents. Second, Milgram was no social science one-hit wonder. For example, although Milgram didn't invent Ithiel de Sola Pool's originally titled Small World Question, which contemplated how many acquaintance links exist between any two randomly selected strangers, Milgram was first to devise a methodological technique that answered it.[2,3] He concluded "…only 5.5 intermediaries will…suffice"; a finding so influential it inspired the concept's now more widely recognized name Six Degrees of Separation.[4] According to Google Scholar, Milgram's Small World Question article has been cited over 11,000 times, which slightly outranks his first Obedience Studies publication. And if one reads the compendium of Milgram's greatest "research" hits,[5] it becomes clear he had a remarkable ability for generating unconventional and intriguing research ideas. The obvious question is how did he do it?

Although early in his research career, Milgram utilized some of the textbook literature's idea-generating techniques; unpublished archival, biographical, and other secondary sources reveal that after leaving graduate school at Harvard University, he repeatedly utilized a technique that, across the entire teaching phase of his career (1961–1984), became his dominant creative norm. That is, often in the presence of his students, he (1) generated research ideas drawn from his surrounding environment and then, (2) immediately or soon after, mapped out the intended study's methodological design. So, in contrast to the textbook literature's research golden rule, Milgram typically performed both tasks without consulting the previous specialist literature. At best, Milgram read the specialist previous literature on a particular research idea after envisioning then designing his research methodology, and occasionally he never read it at all.

The textbook literature often warns against inventive approaches like Milgram's, describing it as potentially calamitous: the idea one spends time developing may already have been completed by someone else. This valid criticism, however, fails to consider a potential benefit associated with Milgram's unconventional approach.

To clarify, it's possible that Milgram's circumvention of the specialist knowledge on any one topic ensured he remained unfamiliar with how, in a specialist field, research problems were conventionally pursued. Doing so diverted him from exposure to the tunnel vision associated with a field's conventional "way/s" of "seeing" and "doing". That is, he remained unaware of the perspectives, struggles, flawed logic, usual methodological approaches, and biases inherent within any specialist literature, Milgram's independent creative lens remained unadulterated by the otherwise powerful influence of what had been done before. Thus, oblivious of the previous literature, Milgram could carelessly drift in his own creative space where he was free to perceive insights that the specialists, shackled within the parochial boundaries of their own fields, could not. Occasionally, this approach enabled him to envision new ways of "seeing" and "doing". This, we argue, was probably *the* key ingredient to his creative flair, thereby helping explain his "methodological ingenuity".[6] This is potentially an exciting discovery because, while remaining cautiously aware of the potential risks associated with Milgram's approach, there is nothing stopping the rest of us from deploying his same creative strategy and potentially generating similar results.

FOR A COMPLETE LIST OF REFERENCES, PLEASE GO TO CPA.CA/PSYNOPSIS

IMPLEMENTING MILGRAM'S CREATIVE NORM

To implement Milgram's dominant creative norm into a classroom environment, it is suggested instructors encourage students to (1) develop their own research ideas, then (2) map out their idea's methodological approach (importantly, both tasks must be completed without consulting the specialist previous literature). As graduate student Maury Silver – who left Harvard University to follow Milgram to the more modest City University of New York (CUNY) – explained it: Milgram's pedagogy was "totally contradictory" to other instructors:

"In almost any other course or seminar [not led by Milgram] you work on an assumed complete body of knowledge. And then you compare various studies, ideas, or whatever. Either you start from previous research and compare and contrast it; even if you have a critical attitude[,] it is still from the literature, from the series of problems that have been traditionalized." (Maury Silver cited in Russell et al.[7]).

However, in Milgram's classes, students were, from scratch, encouraged to generate ideas for research garnered from their everyday lives: "…one of the strangest things" Silver " …learned in those seminars [with Milgram] was a sense of incompleteness; almost a fear of emptiness until some idea did materialize. You never knew you had an idea."[7] Silver adds, in Milgram's classes, one started:

"…to work on something that is completely new, and in which most of the work is in inventing the question, forget about the answer; just inventing the question, is a new experience for most graduate students… It is a frightening experience and I think it is very important."[7]

Completion of steps 1 and 2 ensures the students' creative lens remains unadulterated by what, in a specialist research field, has been done before (thereby potentially enabling them to envision new and unique ways of "seeing" and "doing"). After the first two steps, students are to (3) check the previous specialist literature to ensure their idea/methodological approach is indeed original. The above three-step process is to be repeated until a student envisions a unique research idea/methodology.

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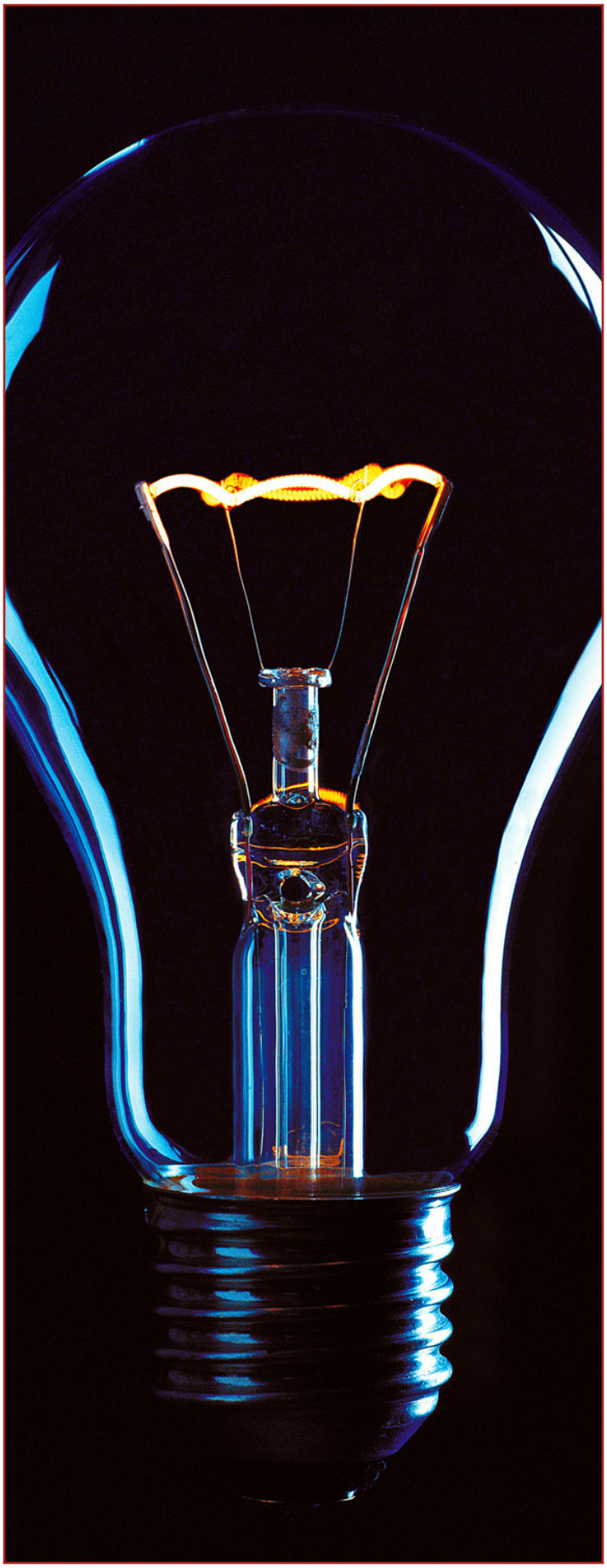

CAMPUS CORNER

PSYCH CONNECT: ADDRESSING CAREER UNCERTAINTY AND ADVANCING PSYCHOLOGY STUDENT SUCCESS AT THE UNIVERSITY OF ALBERTA

Mia Leedell, 4th Year Undergraduate Student, Campus Representative for the CPA,
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The University of Alberta is a hub of groundbreaking psychological research and initiatives, where experts across faculties collaborate to push the boundaries of the field. Beyond academia, clinicians and community professionals in Edmonton work tirelessly to improve mental health and well-being.

Yet, despite the wealth of innovation, knowledge, and opportunity present at this institution, many psychology students face uncertainty about their career paths. As the campus representative for the CPA, I often meet ambitious undergraduates eager to make a difference, and work in psychology, only to find them discouraged by complex career and accreditation pathways, limited access to relevant guidance or information, and daunting competition for graduate programs. Without the right support, many promising minds may abandon their aspirations in psychology, an outcome that is detrimental not only to the field but also to the individuals and communities who rely on psychological professionals and research to support well-being.

Career uncertainty has a direct impact on psychology students' academic and professional success. When students are unsure about the range of career options available to them or the steps required to pursue those paths, motivation and confidence can decline. This uncertainty can make it difficult for students to plan their coursework strategically, seek out relevant research or applied experiences, or remain committed to long-term goals in the field. These challenges do not reflect a lack of ability or interest, but rather a lack of accessible guidance and meaningful connection. Supporting student success, therefore, requires intentional opportunities that promote career clarity, mentorship, and direct engagement with professionals who can demystify pathways and help students envision achievable futures in psychology.

To bridge this gap, I was proud to support CPA undergraduate student representative Mohamed Osman as he worked to launch Psych Connect, a networking event in collaboration with the University of Alberta's Undergraduate Psychology Association. Designed to empower students and provide access to professionals in psychology, Psych Connect provided a platform to engage directly with professionals, ask critical questions, and explore career pathways. The event, held on February 15th, 2025, at the Students' Union Building, connected 123 students with 17 registered psychologists, professors, policy-makers, and industry professionals. Attending professionals also delivered presentations outlining their career trajectories and areas of practice. Participants gained insights through these presentations, built valuable peer and professional networks, and shared a catered dinner in a welcoming environment.

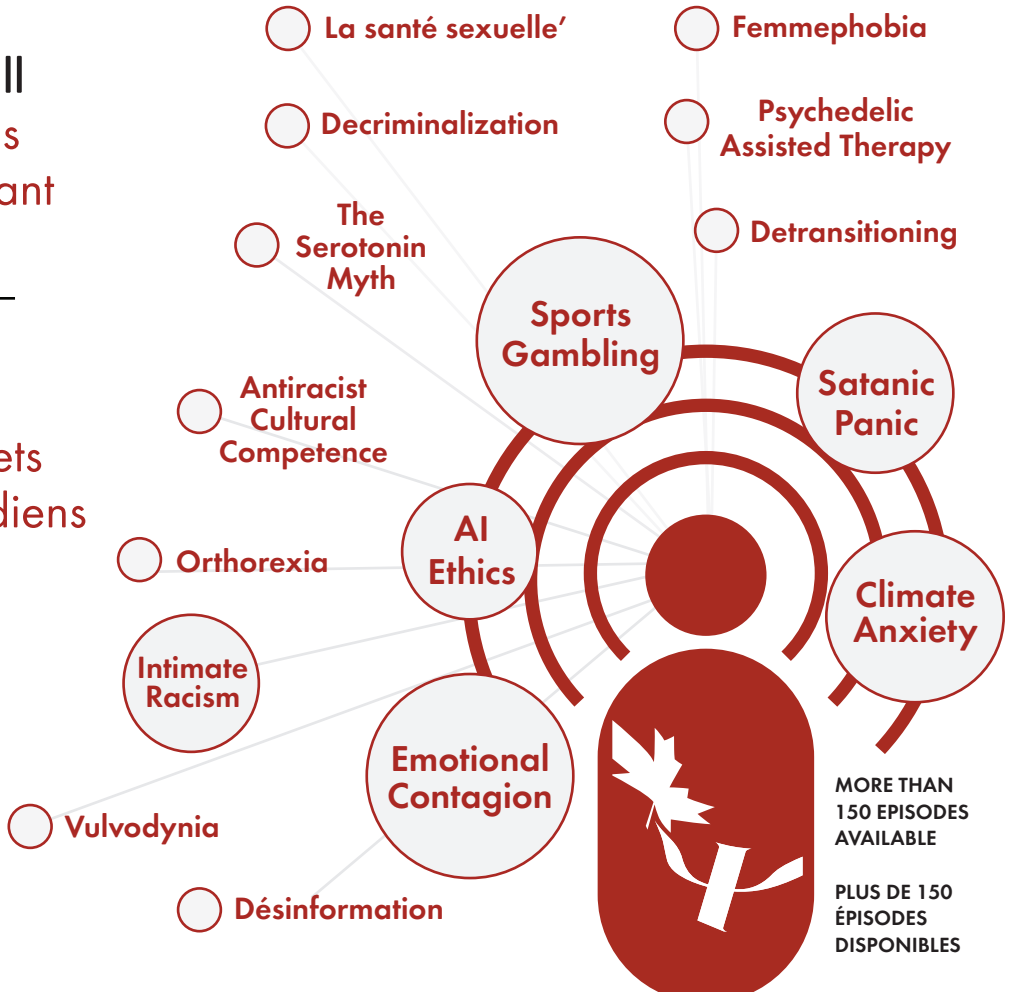
Through initiatives like Psych Connect, CPA representatives at the University of Alberta are helping to equip students with the resources they need to thrive, and highlighting the value of CPA opportunities and membership for those pursuing work in psychology. By fostering professional connections and providing tangible career guidance, we are supporting psychology students in navigating uncertainty and ensuring that the next generation of psychologists and researchers can confidently step into the field, ready to innovate, lead, and make a lasting impact.

FOR A COMPLETE LIST OF REFERENCES, PLEASE GO TO CPA.CA/PSYNOPSIS

The CPA podcast **Mind Full** brings a psychological lens to subjects that are important to Canadians

Le balado **Mind Full** de la SCP apporte un éclairage psychologique sur des sujets importants pour les Canadiens

MIND FULL
A CPA PODCAST



CPA HIGHLIGHTS

A list of some of our top activities since the last issue of *Psynopsis*.

Be sure to contact membership@cpa.ca to sign up for our monthly *Psygnature* e-newsletter to stay abreast of all the things we are doing for you!

PSYCHOLOGY MONTH 2026: "THIS IS PSYCHOLOGY"

Psychology Month (February) 2026 featured the theme "This is Psychology". Throughout the month, we highlighted ways psychology intersects with our everyday lives. From sports gambling to job interviews to medical conditions like HIV, cancer, and sickle cell disease, psychology has a role to play in helping us understand and navigate the world around us. Read our essays, listen to our podcasts, and join us in celebrating psychology's contributions at the CPA website under "Psychology Month".

NEW "PSYCHOLOGY WORKS" FACT SHEET – EXECUTIVE FUNCTIONING

The CPA has released a new Fact Sheet on Executive Functioning prepared by Michaela Ritchie and Veronica Wood. Executive functioning refers to mental skills that help you carry out day-to-day tasks. These skills include: inhibition control (the ability to think before acting), working memory (the ability to hold and juggle a small amount of information while performing another task), and cognitive flexibility (the ability to adjust your thinking or approach when situations change, so you can find new ways to solve problems or respond). This Fact Sheet outlines what typical executive functioning looks like, common difficulties in executive functioning, and how to treat those difficulties.

HELPING CHILDREN LEARN TO READ – NEW BOOKLETS RELEASED

The CPA has released two research-based booklets designed to help kindergarten children with phonological awareness (the ability to recognize and manipulate the spoken parts of sentences and words). These booklets were created in response to a growing focus on phonics-based reading instruction in kindergarten. One booklet is intended for use by parents and caregivers, while the second is intended for use by teachers. Go to "publications" on the CPA website to access the booklets.

NEW MIND FULL PODCAST EPISODES

Subscribe and listen to the Mind Full podcast on SoundCloud, Apple Music, Spotify, YouTube, or wherever you get your podcasts. Listen to our latest episodes about psychology and HIV with Dr. Sean Rourke, cancer care with Bob Wakeham and Dr. Sheila Garland, or domestic violence and the COVID carryover with Sabina Greenley and Dr. Maddy Sheppard-Perkins.

CPA HIGHLIGHTS

CPA REPORT REVIEWS THE NUMBER OF PSYCHOLOGISTS IN CANADA

Given the growing importance placed on access to mental health care services and the role of psychology, the CPA has released a report that reviews the publicly available data collected by the Canadian Institute for Health Information from 2017 to 2023 on the number of psychologists in Canada. Moving forward, the policy primer identifies two related next steps that need to be considered.

ELIGIBILITY FOR THE CANADA STUDENT LOAN FORGIVENESS PROGRAM

The CPA, advocating in collaboration with the Extended Health Professions Coalition (EHPC) – which represents a group of regulated health professionals – was very pleased to see that as of December 31, 2025, the federal government expanded eligibility to psychologists for the Canada Student Loan Forgiveness Program.

RESPONSE TO THE COLLEGE OF PSYCHOLOGISTS AND BEHAVIOUR ANALYSTS OF ONTARIO'S (CPBAO) PROPOSED ENTRY-TO-PRACTICE CHANGES

The CPA responded to the request for comment by the CPBAO regarding proposed entry-to-practice changes for psychologists and psychological associates. We strongly opposed the proposal to reduce entry-to-practice standards for psychologists and psychological associates. We argued that the proposed changes – lowering educational requirements, shortening supervised practice, and removing key examinations – would undermine public protection, dilute professional competence, and fail to address the administrative and access issues raised by the Office of the Fairness Commissioner.

NATIONAL CREDENTIAL HARMONIZATION POSITION STATEMENT RELEASED

The CPA's Board of Directors released their position statement Breaking Down Barriers – A National Approach to Improving the Credentialling and Licensure of Psychologists, and their Mobility in Canada. The statement addresses the need to harmonize entry-to-practice and registration/licensing requirements for psychologists across the country with the goal of increasing their labour mobility.

NEW RESOURCE: PATHWAYS TO GRADUATE SCHOOL

Applying to graduate school in psychology is a competitive and often confusing process, particularly for students from under-represented groups. We designed a roadmap that helps students considering graduate school understand what graduate programs are looking for and how to prepare effectively.

CPA Annual National Convention
Congrès annuel de la SCP

Learn, Grow, Connect | Apprendre, Grandir, Créer des Liens

- Canada's largest annual gathering of psychologists, researchers, students, and professionals – attracting thousands of delegates from across the country and internationally.
- Le plus grand rassemblement annuel de psychologues, chercheurs, étudiants et professionnels au Canada, qui attire des milliers de délégués de partout au pays et de l'étranger.

- Showcasing psychology's research and impact on public policy, mental health advocacy, and community well-being in Canada.
- One of North America's longest-running psychology conferences - over 80 years!

- Présentation des recherches en psychologie et de leur incidence sur les politiques publiques, la défense de la santé mentale et le bien-être communautaire au Canada.
- L'une des plus anciennes conférences de psychologie d'Amérique du Nord, depuis plus de 80 ans!

- Opportunities to meet with 1700+ of the nation's best and brightest practitioners, researchers, educators and students.
- Share your research findings.

- Occasions de rencontrer plus de 1 700 praticiens, chercheurs, enseignants et étudiants parmi les meilleurs et les plus brillants du pays.
- Faites connaitre vos résultats de recherche.

CANADIAN PSYCHOLOGICAL ASSOCIATION
SOCIÉTÉ CANADIENNE DE PSYCHOLOGIE

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