EDPE 704/706: PROFESSIONAL DEVELOPMENT SEMINAR
Fall 2020 (3 credits) | Fridays 9:00-10:30 AM
Online | https://mcgill.zoom.us/j/3943062757

Instructor:	Dr. Nathan C. Hall	**Office Hours:**	By appointment
Email:	nathan.c.hall@mcgill.ca		

Course Objectives

This professional development seminar provides an overview of the doctoral program experience and outlines effective strategies for conducting literature reviews, selecting a dissertation topic, and applying for doctoral funding. This course also offers insights into recent research developments in identifying questionable research practices, enhancing replicability of findings, and adopting open science protocols. Finally, this seminar outlines useful strategies for public engagement via social media, and explores the transferability of doctoral competencies to non-academic careers in the public and private sectors.

The overall goal of this seminar is to assist first- and second-year PhD students in applying the knowledge gained in various content and methods courses to their dissertation research. This seminar is additionally intended to facilitate the timely completion of the comprehensive examination paper in the second term of the second PhD year and subsequent submission of an initial draft of the dissertation research proposal. This course is further designed to introduce PhD students to current overarching research issues and challenges with respect to online engagement and research ethics, as well as finding research-intensive employment.

Specific learning outcomes include:
- An analytic capacity to conduct critical reviews of literature and the ability to present the synthesis of literature in a lucid and logical manner;
- The ability to articulate a coherent and global question for the comprehensive examination;
- The ability to prepare a concise proposal for a traditional or manuscript-based dissertation (i.e., problem statement, identification of gaps in reviewed literature, research questions, proposed methodology);
- Requisite capacities for professional development and engagement in a contemporary research milieu as a doctoral student and in employment contexts.

In addition to brief online lectures, guest online lectures by leading experts, and literature review tasks, the seminar affords multiple opportunities to conduct in-class presentations as preparation for research talks. Students are strongly encouraged to contribute to online discussions and to invite their dissertation supervisors/committee to view course presentations related to their research. All required course readings are indicated in the schedule below and available for download in myCourses. McGill network access (VPN) may be required to access article links.

Course Requirements

Weekly online class sessions will consist of student-led activities, group discussions, chats with guest speakers, and research presentations, with the topics addressed consisting of the assigned readings addressing for that week. Summative online lectures from the instructor and pre-recorded guest lectures will also be available in myCourses and should be viewed prior to class. Final course grades are comprised of in-class and submitted assignments intended to facilitate professional competencies. In accordance with McGill University's Charter of Students' Rights, students have the right to submit in English or in French any written work that is to be graded.

1.   Participation (10%)

You are expected to come to online class sessions prepared; having prepared questions/comments after viewing the corresponding online lectures and reviewed required readings for that week. Grading criteria will assess active contributions to class discussions based on having previously read the assigned readings as well as the types of questions and feedback posed to classmates or guest speakers (higher-order vs. factual questions).

2.   Funding Presentation (Sept. 11; 10%)

All students are required to complete a pre-recorded or in-class presentation outlining useful information and advice concerning the preparation of SSHRC or FRQSC fellowship applications (e.g., if you have previously received or applied), or other local, national, and international scholarships available to graduate students. Students may also outline advice/informational documentation pertaining to internship/exchange activities for graduate students (e.g., MITACS, DAAD), as well as opportunities available internally to support research or training experiences (e.g., GREAT, mobility awards). It is expected that funding presentations will not simply list readily available online information but provide concrete strategies for preparing competitive applications. Presentations may be provided live during the online class session or uploaded to myCourses prior to class in Week 2. On time submissions are encouraged to allow for potential use by classmates prior to the FRQSC submission deadline.

3.   Proposal Presentation (Oct. 9; 20%)

Provide a 15-20 minute recorded presentation outlining a *potential dissertation topic* by specifying a relevant (a) target population (e.g., teachers, undergraduates), (b) general theoretical perspective (e.g., self-regulation, expectancy-value theory), (c) research objective (e.g., exploratory research question), (d) methodological approach (e.g., case study, action research, quantitative, longitudinal, descriptive, experimental), (e) study measures (e.g., possible questionnaires, interview questions, outcomes), and (f) method of analysis (e.g., grounded theory, mediation in regression). This presentation is to be completed independently by students and uploaded to myCourses prior to the Week 6 class to inform our online discussion on dissertation topic selection. Please note that video uploads will be viewable by your classmates on myCourses to facilitate online class discussions. Proposals addressing general research topics (e.g., science self-efficacy in K-12 girls) or specific hypotheses based on identified gaps in existing literature are permitted. *As this activity is completed prior to the literature review assignment in which research questions (i.e., section "c") should be more specifically delineated, it is intended mainly for students to work through a potential research topic from theory to analysis to gain a deeper appreciation of the logistical (e.g., time commitment) and analytical implications (e.g., required stats training) for different types of research questions.*

4.   Article Presentations (30%)

Article 1 (Sept. 25; 10%): Each student must select one empirical article mentioned in the Week 1 review article by Sverdlik et al. (2018) on the *doctoral student experience* and provide a 5-10 minute in-class summary of the article (e.g., PowerPoint with screen sharing). In the presentation, be sure (a) succinctly outline the study rationale and key research questions (e.g., study hypotheses), (b) outline the study methods and research findings (e.g., qualitative, quantitative analyses), and (c) highlight practical implications for graduate students and/or faculty supervisors.

Article 2 (Oct. 16, 30; 10%): Select one assigned article from Week 7 (*Questionable Research Practices*) or Week 9 (*Replicability*), and provide a 5-10 minute in-class summary of the article (e.g., PowerPoint, etc.). In the presentation, be sure to demonstrate in-depth knowledge of the article content by (a) defining key terms (e.g., "HARKING", Week 7), (b) highlighting critical arguments and themes (e.g., arguments for/against the "replication crisis", Week 9), and (c) explaining key figures/tables that best exemplify the article's assertions or findings. If you are registered in EDPE 706, please be sure to select an article you did not present previously in EDPE 704. Video uploads may be requested as an

alternative to presenting live in the online class session (e.g., if you are unable to attend or must leave early), with slides/videos uploaded prior to class in myCourses for viewing by your classmates.

Article 3 (Nov. 6, 13; 10%): Select one assigned article from Week 10 (*Open Science Practices*) or Week 11 (*Social Media*), and provide a 5-10 minute in-class summary of the article (see instructions for Article 2).

5. **Literature Review Spreadsheet & Presentation (30%)**

All students will conduct a preliminary literature search and compile a detailed spreadsheet outlining at least 30 articles relevant to up to three topics of research interest. For new doctoral students (EDPE 704), this exercise serves as an exploratory analysis of the scope and nature of available literature concerning potential comprehensive exam topics. For EDPE 706 students, the literature search should represent a more focussed repository of articles to be utilized during the comprehensive exam typically scheduled for the following term (e.g., serving as an initial reference list for the comprehensive exam proposal). Spreadsheets including multiple descriptive columns (e.g., reference, population, theory, measures, findings) and explicit notation outlining specific search terms/criteria must be uploaded to myCourses by Week 13 (Nov. 28). Individual 5-10 minute video presentations (e.g., PowerPoint, Excel) that provide an overview of the article themes and explain the relevance of articles selected to potential comprehensive exam questions must be uploaded by Week 14 (Dec. 4; no class). Video uploads will be viewable by your classmates, and students who complete their spreadsheet earlier (e.g., EDPE 706 students) are encouraged to upload their presentation earlier to assist their classmates in spreadsheet preparation.

Grading

Final course grades are assigned on a pass/fail basis with an overall grade of 85% across all course requirements (an "A" grade) required for a passing grade. Students are strongly encouraged to discuss any grading concerns directly with the instructor. In the event of extraordinary circumstances beyond the University's control, the course content and grading rubrics are subject to change.

Class Policies

*   **Online Participation & Conduct**

    Attending online class sessions prepared to contribute meaningfully to group discussion is an absolute prerequisite. Students are expected to read the assigned material and view posted videos (lectures, guest lectures) before each class, contribute to discussions during online class sessions concerning the readings, and attend each online class session except in the case of illness, official closures, or extenuating circumstances. Students are responsible for obtaining missed class content from other students or the instructor. All electronic devices should be silenced prior to live online class sessions, and your microphone should remain muted while you are not speaking to minimize noise disruptions.

    If online class sessions are to be <u>recorded</u> (e.g., for students who cannot attend live), you will be notified through a 'pop-up' box in Zoom. By remaining in sessions that are recorded, you agree to the recording, understand that the recording will be made available in myCourses to students registered in the course, and understand that your image, voice, and name will be disclosed to your classmates. If you do not wish to be recorded, please clearly inform the instructor in order to cancel recording or provide alternate a participation alternative.

    Although it is strongly encouraged that you enable your webcam during online class sessions to help create a sense of community and participation, video participation is not required. However, live <u>audio communication</u> (e.g., via microphone, telephone) is required during class sessions to facilitate participation and provide feedback

to your classmates. If you do not wish to or cannot participate in online class sessions due to extenuating circumstances, please indicate this to the instructor to allow for alternate participation options to be coordinated. For more information on effective participation in online McGill courses, please review the Guidelines on Remote Teaching and Learning (https://www.mcgill.ca/tls/instructors/class-disruption/strategies/guidelines-remote).

- **Late Submissions**

  Late project submissions will be penalized 10% per day. Ensure your files are backed-up and ready for submission before they are due, and allow yourself sufficient time prior to the deadline to confirm your files are uploaded. All reported upload issues concerning university technology (e.g., email, myCourses) must be directly confirmed by McGill ICS personnel to the instructor.

- **Deadline Extensions & Changes**

  Deadline extensions and changes may be considered if the request is made in writing (e.g., via email) and a prior notice of absence and/or appropriate formal documentation regarding excusable absences is provided. Possible excusable absences include illness (e.g., physician note, hospital record), funerals (e.g., travel receipts, obituary), religious observances, participation in university activities, and extenuating circumstances. Revised deadlines *must be within one week* of the original deadline. Class activity dates/content may be exchanged between students in case of scheduling difficulties.

- **Academic Integrity**

  McGill University values academic integrity. Therefore, all students must understand the meaning and consequences of cheating, plagiarism, and other academic offences under the Code of Student Conduct and Disciplinary Procedures (see www.mcgill.ca/integrity for more information). In this course, plagiarism is defined as 5 or more words in a row from source other than your own original writing for this class (e.g., textbook, website, article, another paper, etc.) that is not included within quotation marks and followed by a parenthetical source notations. Papers suspected of plagiarism will be scanned electronically using digital services that are also available for checking papers prior to submission (e.g., WCopyfind; www.dustball.com/cs/plagiarism.checker).

  As per the zero-tolerance plagiarism policy for this course, submissions in which plagiarism is observed will be forwarded to the Associate Dean of Graduate and Postdoctoral Studies for disciplinary action). Instructor generated course materials (e.g., handouts, notes, summaries, exam questions, etc.) are protected by law and may not be copied or distributed in any form or in any medium without explicit permission of the instructor. Note that infringements of copyright can be subject to follow-up by the University under the Code of Student Conduct and Disciplinary Procedures. Additional policies governing academic issues that affect students are found in the McGill Charter of Students' Rights (Handbook Chapter 1). Additional policies governing academic issues that affect students are found in the Handbook on Student Rights and Responsibilities, Academic Integrity and Code of Conduct (online at https://www.mcgill.ca/deanofstudents/students/student-rights-responsibilities).

  With respect to sharing of video content for this course, it is your responsibility to ensure that video links (e.g., unlisted YouTube videos) and class discussion videos are not reproduced or shared in the public domain. You may use this content for your educational (and research) purposes, but you cannot allow others to use it by sharing or selling to others online. Please refer to McGill's Guidelines for Instructors and Students on Remote Teaching and Learning for further information.

- **Students with Disabilities**

  If you are a student with a physical or learning disability, please first contact the Office for Students with Disabilities (514-398-6009; http://www.mcgill.ca/osd), and then myself as soon as possible thereafter to make necessary arrangements. Students MUST have registered with the OSD and informed the instructor at least two weeks prior to a course deadline in the case of disability-related deadline changes. Explanations for assignment or grade difficulties involving learning disabilities not previously documented by the OSD will not be accepted.

- **Religious Observances**

  It is the policy of McGill University that students not be penalized for religious observances. Students will be allowed, whenever possible, deadline extensions and presentation date changes due to such absences. It is the student's responsibility to contact the instructor at least two weeks before the absence, at which time arrangements will be made for deadline changes.

- **Course Evaluation**

  Students are strongly encouraged to fill out the Mercury online evaluation for this course at the end of term. Online course evaluations serve primarily as a tool towards teaching improvement, informing students about courses, and as one of the elements for evaluating the teaching performance of staff for reappointment, tenure, and promotion. For more information consult the Teaching and Learning Services website.

- **Course Communication**

  Emails will be sent to the class in the event of class cancellations or announcements and are the best way to contact the instructor (nathan.c.hall@mcgill.ca). Ensure all direct email communication with the instructor is from a McGill email addresses (to verify identity), and allow at least 2 business days for an email reply from the instructor. The course syllabus, videos, readings, and grades are also accessible through the myCourses system. To avoid problems with myCourses functionality, Firefox or Internet Explorer browsers are encouraged, ensure the java software on your computer is up to date, and click the "Support / System Check" link on your myCourses home page (top right) to ensure your browser is properly configured.

- **Acknowledgements**

  Weeks 4-6 of this syllabus were based on the Fall 2016 EDPE 704/706 syllabus by Dr. Alenoush Saroyan (McGill).

Course Schedule

Week	Date	Topics	Deadlines	Readings
1	Sept. 4	**Introduction & Doctoral Studies Overview** • *Guest: Anna Sverdlik (video)*		Sverdlik et al. (2018), Sverdlik & Hall (2019), Lord (2004)
2	Sept. 11	**Doctoral Funding Application Strategies** • *Guest: So Yeon Lee (live/video)*	**Funding Presentation (live/upload)**	
3	Sept. 18	**Literature Reviews: Search Strategies** • *Guest: Emily Kingsland (live)*		
4	Sept. 25	**Literature Reviews: Foundational Overview**	**Article 1 Presentation (live)**	Kennedy (2007), Boote & Beile (2005, 2006), Maxwell (2006)
5	Oct. 2	**Literature Reviews: Errors & Biases**		Suri & Clarke (2009), Dunkin (1996), Pigott et al. (2013)
6	Oct. 9	**Dissertation Topic Selection**	**Proposal Presentation (upload)**	Alon (2009), McGuire (1997)
7	Oct. 16	**Questionable Research Practices: Overview**	**Article 2 Presentation (live)**	John et al. (2012), Fiedler & Schwartz (2016), Janke et al. (2018), Flake et al. (2017)
8	Oct. 23	**Questionable Research Practices: Validity** • *Guest: Sneha Shankar (live/video)*		Bandalos (2018; pp. 254-268), Shankar et al. (2020)
9	Oct. 30	**Replicability in Psychological Research** • *Guest James Heathers (video)*	**Article 2 Presentation (live)**	Zwaan et al. (2018), De Boeck & Jeon (2018), Open Science Collaboration (2015)
10	Nov. 6	**Open Science Practices** • *Guest: Melissa Kline (live/video)*	**Article 3 Presentation (live)**	McKiernan et al. (2016), Nosek & Bar-Anan (2012), Kidwell et al. (2016), Nosek et al. (2018)
11	Nov. 13	**Academic Social Media** • *Guest: Stefanie Haustein (live/video)*	**Article 3 Presentation (live)**	Bik & Goldstein (2013), Van Noorden (2014), Casler et al. (2013), Haustein (2018), Veletsianos & Stewart (2016)
12	Nov. 20	**Non-Academic Careers: Overview** • *Guest: Maren Wood (live/video)*		Pennycook & Thompson (2018), Sinche et al. (2017), Lachapelle & Burnett (2018)
13	Nov. 27	**Non-Academic Careers: Government & Industry** • *Guests: Rebecca Maymon & Kyle Hubbard (live/video)*	**Review Spreadsheet (upload)**	Maymon et al. (2019)
14	Dec. 4	**[No Class]**	**Review Presentation (upload)**	

Reading List

Doctoral Studies Overview

Sverdlik, A., & Hall, N. C. (2019). Not just a phase: Exploring the role of doctoral program stage on motivation and well-being. *Journal of Adult and Continuing Education.* doi:10.1177/1477971419842887

Sverdlik, A., Hall, N. C., Hubbard, K. A., & McAlpine, L. (2018). The PhD experience: A review of the factors influencing doctoral students' completion, achievement, and well-being. *International Journal of Doctoral Studies, 13*, 361-388. doi:10.28945/4113

Lord, C. G. (2004). *A guide to PhD graduate school: How they keep score in the big leagues.* In J. M. Darley, M. P. Zanna, & H. L. Roediger III (Eds.), *The compleat academic: A career guide* (p. 3–15). American Psychological Association.

Synthesizing Literature

Kennedy, M. (2007). Defining a literature. *Educational Researcher, 36*, 139-147.

Boote, D., & Beile, P. (2005). Scholars before researchers: On the centrality of the dissertation review in research preparation. *Educational Researcher, 34*, 6, 3-15.

Boote, D., & Beile, P. (2006). On "Literature reviews of, and for, Educational Research": A response to the critiques of Joseph Maxwell. *Educational Researcher, 35*, 9, 32-35.

Maxwell, J. (2006). Literature reviews of, and for, educational research: A commentary on Boote and Beile's "Scholars before researchers". *Educational Researcher, 35*, 28, 3-15.

Suri, H., & Clarke, D. (2009). Advancements in research synthesis methods: From a methodologically inclusive perspective*. Review of Educational Research, 79*, 395-430.

Dunkin, M. (1996). Types of errors in synthesizing research in education. *Review of Educational Research, 66*(2), 87-97.

Pigott, T., Valentine, J., Polanin, J., Williams, T., & Canada, D. (2013). Outcome-reporting bias in education research. *Educational Researcher, 42*, 8, 424-432.

Dissertation Topic Selection

Alon, U. (2009). How to choose a good scientific problem. *Molecular Cell Forum, 35*(6), 726-728. doi: 10.1016/j.molcel.2009.09.013.

McGuire, W. J. (1997). Creative hypothesis generating in psychology: Some useful heuristics. *Annual Review of Psychology, 48*, 1-30.

Questionable Research Practices

John, L. K., Loewenstein, G., & Prelec, D. (2012). Measuring the prevalence of questionable research practices with incentives for truth telling. *Psychological Science, 23*(5), 524-532. doi:10.1177/0956797611430953

Fiedler, K., & Schwarz, N. (2015). Questionable research practices revisited. *Social Psychological and Personality Science, 7*, 45–52. doi:10.1177/1948550615612150

Flake, J. K., Pek, J., & Hehman, E. (2017). Construct validation in social and personality research: Current practice and recommendations. *Social Psychological and Personality Science, 8*(4), 370–378. doi:10.1177/1948550617693063

Janke, S., Daumiller, M., & Rudert, S. C. (2018). Dark pathways to achievement in science: Researchers' achievement goals predict engagement in Questionable Research Practices*. Social Psychology and Personality Science*, 1-9. doi:10.1177/1948550618790227

Bandalos, D. L. (2018). Validity. In D. L. Bandalos (Ed.), *Measurement theory and applications for the social sciences* (pp. 254–297). New York, NY: Guilford Press. [READ only pp. 254-268]

Shankar, S., Marshall, S. K., & Zumbo, B. D. (2020). A systematic review of validation practices for the goal attainment scaling measure. *Journal of Psychoeducational Assessment, 38*(2) 236-255. doi:10.1177/0734282919840948

Replicability in Psychological Research

Zwaan, R. A., Etz, A., Lucas, R. E., & Donnellan, M. B. (2018). Making replication mainstream. *Behavioral and Brain Sciences*, e120. doi:10.1017/S0140525X17001972

De Boeck, P., & Jeon, M. (2018). Perceived crisis and reforms: Issues, explanations, and remedies. *Psychological Bulletin, 144*(7), 757-777. doi:10.1037/bul0000154

Open Science Collaboration (2015). Estimating the Reproducibility of Psychological Science. *Science, 349*(6251), aac4716. doi:10.1126/science.aac4716

Open Science Practices

McKiernan, E. C., Bourne, P.E., Brown, C. T., Buck, S., Kenall, A., Lin, J., . . . Yarkoni, T. (2016). How open science helps researchers succeed. *Elife, 5*, e16800. doi:10.7554/eLife.16800

Nosek, B. A., & Bar-Anan, Y. (2012). Scientific utopia: I. Opening scientific communication. *Psychological Inquiry, 23*, 217-243. doi:10.1080/1047840X.2012.692215

Kidwell, M. C., Lazarević, L. B., Baranski, E., Hardwicke, T. E., Piechowski, S., Falkenberg, L.-S., . . . Nosek, B. A. (2016). Badges to acknowledge open practices: A simple, low-cost, effective method for increasing transparency. *PLoS Biology, 14*(5), e1002456. doi:10.1371/journal.pbio.1002456

Nosek, B. A., Ebersole, C. R., DeHaven, A. C., & Mellor, D. T. (2018). The preregistration revolution. *PNAS, 115*(11), 2600-2606. doi:10.1073/pnas.1708274114

Academic Social Media

Bik H. M., & Goldstein, M. C. (2013). An introduction to social media for scientists. *PLoS Biology, 11*(4), e1001535. doi:10.1371/journal.pbio.1001535

Van Noorden, R. (2014). Scientists and the social network. *Nature, 512*, 126-129. http://www.nature.com/news/online-collaboration-scientists-and-the-social-network-1.15711

Casler, K., Bickel, L., & Hackett, E. (2013). Separate but equal? A comparison of participants and data gathered via Amazon's MTurk, social media, and face-to-face behavioral testing. *Computers in Human Behavior, 29*, 2156-2160. doi:10.1016/j.chb.2013.05.009

Haustein, S. (2018). Scholarly Twitter metrics. In W. Glänzel, H. F. Moed, U. Schmoch, & Thelwall, M. (Eds.), *Handbook of quantitative science and technology research*. Springer. https://arxiv.org/abs/1806.02201

Veletsianos, G., & Stewart, B. (2016). Discreet openness: Scholars' selective and intentional self-disclosures online. *Social Media + Society*, 1-11. doi:10.1177/2056305116664222

Non-Academic Careers

Pennycook, G., & Thompson, V. A. (2018). An analysis of the Canadian cognitive psychology job market (2006-2016). *Canadian Journal of Experimental Psychology, 72*(2), 71-80. doi:10.1037/cep0000149

Sinche, M., Layton, R. L., Brandt, P. D., O'Connell, A. B., Hall, J. D., Freeman, A. M., . . . Brennwal, P. J. (2017). An evidence-based evaluation of transferrable skills and job satisfaction for science PhDs. *PLoS ONE, 12*(9), e0185023. doi:10.1371/journal.pone.0185023

Lachapelle, F., & Burnett, P. J. (2018). Replacing the Canadianization generation: An examination of faculty composition from 1977 through 2017. *Canadian Review of Sociology, 55*, 40-66. doi:10.1111/cars.12178

Maymon, R., Chevrier, M., Amokrane, A., Lafon, M. (October, 2019). *PhDetectives: Revealing PhD competencies and employment trends in Canada.* Adoc Talent Management, in partnership with the Canadian Association of Postdoctoral Studies (CAPS), Finance Montreal, and Mitacs. Available: https://en.adoc-tm.ca/etudes