

**Research Methods
EDKP 605
Fall 2022**

3 credits; Currie Gymnasium, Room 304,
Wednesdays, 2:35pm to 5:25pm

General Information:

Professor	Office	Phone:	E-mail:
Shane Sweet, Ph.D. (pronouns: he/him)	Currie Gym, 203	Ext 09903	shane.sweet@mcgill.ca

Course Description:

The purpose of this course is to help students develop essential skills required to generate new knowledge and evaluate current knowledge claims in research concerning kinesiology and physical education (KPE) topics or issues. The course is constructed to highlight key issues that pervade the nature of KPE research, and to provide students with the opportunity to think constructively about scientific research and how this research is disseminated. A portion of the constructive thinking process concerns the identification and understanding of assumptions made by researchers in the pursuit of new knowledge (or evaluation of old knowledge claims) within the KPE disciplines. A compliment to the understanding of assumptions is the comprehension of the diversification inherent within the field of KPE's research and multidisciplinary approaches to understanding human movement. This course will provide students with the opportunity to examine their assumptions about research and consider a range of methodological issues that pervade research in KPE. Furthermore, students will be able to critically assess the methods of disseminating research in KPE to the public.

As such, this course represents a critical examination of philosophical issues, current paradigms, and research methodology related to conducting research in Kinesiology and Physical Education.

Course Objectives:

1. To introduce the student to select philosophical issues in KPE research;
2. To introduce the student to select methodological issues in KPE research;
3. To provide each student with an opportunity to enhance his/her understanding of how theories/methods of science can be used to answer research question(s) within KPE;
4. To provide insight into the notion of scientific review and opportunities for the development of constructive skills when evaluating knowledge claims;
5. To assist the student in the selection of a research problem suitable for scientific inquiry in KPE.
6. To introduce the student to methods of knowledge translation and dissemination

Course Materials:

Readings will be posted on myCourses.

Course Evaluation (see Appendix for details)

	Due Date	% of Final Grade
Assignment 1: Philosophical assumption	September 14 th , 2022	10%
Assignment 2: Database search, literature gaps, research question	October 5 th , 2022	10%
Research design group presentation - Submit presentation topic - Presentation	- September 28 th , 2022 - October 19 th , 2022	15%
Assignment 3: Ethics	October 26 th , 2022	5%
Assignment 4: Methods Section	November 9 th , 2022	10%
Research Proposal Summary	November 23 rd , 2022	20%
Research Proposal Poster	November 23 rd , 2022 or November 30 th , 2022	20%
Participation	N/A	10%

Language of Submission

“In accord with McGill University’s [Charter of Student Rights](#), students in this course have the right to submit in English or in French any written work that is to be graded. This does not apply to courses in which acquiring proficiency in a language is one of the objectives.”
(Approved by Senate on 21 January 2009)

« Conformément à [la Charte des droits de l’étudiant](#) de l’Université McGill, chaque étudiant a le droit de soumettre en français ou en anglais tout travail écrit devant être noté, sauf dans le cas des cours dont l’un des objets est la maîtrise d’une langue. »

Policy statement: 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](#).” (Approved by Senate on 29 January 2003)
(See McGill’s [guide to academic honesty](#) for more information.)

« L’université McGill attache une haute importance à l’honnêteté académique. Il incombe par conséquent à tous les étudiants de comprendre ce que l’on entend par tricherie, plagiat et autres infractions académiques, ainsi que les conséquences que peuvent avoir de telles actions, selon

le Code de conduite de l'étudiant et des procédures disciplinaires (pour de plus amples renseignements, veuillez consulter le [guide pour l'honnêteté académique de McGill](#).»

Expectations for Student Participation and Evaluation of Participation

This is a graduate class, as such, students are expected to attend every class for its entire duration. If you miss one class without a valid reason, up to 5% will be deducted from your participation grade. Please see Prof Sweet in advance if you expect to miss a class or contact him by email prior to the start of class if you have COVID-19 symptoms or other illness.

Participation is measured by attendance to course, engagement with the material, participation in the group and individual active learning activities, and quality (rather than quantity) of questions, comments, and contributions to discussions. Your readiness to learn and general attitude and respect towards your classmates and myself will also be considered.

Course Schedule

Date	Topic	Instructor	Readings
Week 1: August 31st, 2022	Part 1: Introduction to course & research methods Part 2: Research philosophy	Sweet	Tamminen & Poucher (2020)
Week 2: September 7, 2022 E-classroom in the Humanities and Social Sciences Library (McLennan).	Part 1: Introduction to research – literature reviews & reference management. Part 2: Scientific Writing	Marcela Isuster (Librarian) Usselman	No readings
Week 3: September 14, 2022	Part 1: Research ethics and research ethics boards Part 2: Ethical research	Lepore Andersen	No readings
Week 4: September 21, 2022	Part 1 : Critical thinking and your literature review Part 2: How to develop a research question	Sweet Sweet	Meltzoff 2018 Galvan (2017) – Chapter 5 <u>Supplemental:</u> Lovejoy 2011; Galvan (2017): Chapter 6 to 8 Meltzoff 2018 (pp. 23-32) Riva 2012 Willig (2008)

Week 5: September 28, 2022	Introduction to quantitative research	Sweet	Thomas: Chapter 16 (2 pages) and 18 Supplemental (online at McGill library): Frey, B. B. (Ed.). (2018). The sage encyclopedia of educational research, measurement, and evaluation. SAGE Publications.
Week 6: October 5, 2022	Introduction to qualitative research	Sweet (Qualitative)	Sparkes & Smith (2013): What is qualitative research? Poucher (2020)
October 12, 2022	Reading week		
Week 7: October 19, 2022	Research Designs and Approaches Blitz	605 Students	
Week 8: October 26, 2022	Part 1: Biases, sampling, quant analysis Q&A Part 2 : Catch-up & Research Q&A	Sweet	Thomas (Chapter 7) Nuzzo (2014) Lakens (2013)
Week 9: November 2 nd , 2022	Part 1: Mixed Methods Part 2: Analyses - Qual	Harvey Danielle Alexander Zhiyang Shi	Harvey (2020) Sparkes & Smith (2013) Alexander (in press) Orr (2020)
Week 10: November 9, 2022	Part 1: Graduate Student Research Perspectives Part 2: Community-university partnerships	Nour Saadawi Frédérique Parent-L'Ecuyer Sweet & Koch	Gainforth (2021) Koch (2020)
Week 11: November 16, 2022	Knowledge translation: Creating a KT plan, KT options, lay audience writing	Sweet	Lavis (2003) KT planning tool
Week 12: November 23, 2022	Research Proposal Presentations	Sweet	
Week 13: November 30, 2022	Research Proposal Presentations	Sweet	

Equity, Diversity and Inclusion

I wholeheartedly support equity, diversity and inclusion in all settings, including in the academic setting. Having said that, I may not have the opportunity to know your individual experiences and backgrounds. I will try to get to know everyone and do my best to promote an inclusive environment. If I have unintentionally made anyone feel excluded, please come speak with me. Education is the best way for us to learn and grow to ensure that everyone has an opportunity for a safe space during your time at McGill and, specifically, in my classes. Please do not hesitate to approach me on any matters related to equity, diversity, and including. Thank you in advance for your co-operation.

Policy regarding the use of email

All emails and electronic correspondence will be sent through myCourses. It is your responsibility to verify, at least twice a week, the email address that is linked with myCourses (your McGill University email by default). I recommend students with questions about class material and assignments seek assistance from the me before/after class or by appointment. Remember that your classmates are your first line of correspondence. If you email me, please have the course code EDKP 605 as the subject line of your emails to ensure a prompt reply. I reserve the right **NOT** to answer any assignment-related questions asked via email one to two business days prior to the deadline of an evaluation (and especially on weekends).

Writing support

As a graduate course, there is a heavy writing component to this course. McGill offers course to help with academic writing. If you want to strengthen your writing skills, I recommend that you visit the writing support (courses, writing groups, etc.) offerings by McGill's Graphos:

<https://www.mcgill.ca/graphos/courses>

Office for Students with Disabilities

If you experience barriers to learning in this course, do not hesitate to discuss them with me and contact [Student Accessibility & Achievement](#) (formerly known as the Office for Students with Disabilities & Tutorial Services) for support.

End-of-course evaluations (Mercury)

“[End-of-course evaluations](#) are one of the ways that McGill works towards maintaining and improving the quality of courses and the student's learning experience. You will be notified by e-mail when the evaluations are available. Please note that a minimum number of responses must be received for results to be available to students.”

I also review all my end-of-course evaluations seriously with the goal of improving this course from year to year. Your constructive feedback is greatly appreciated.

Accommodation of religious days.

Students who because of religious commitment cannot meet academic obligations, other than final examinations, on certain holy days are responsible for informing their instructor, with two weeks' notice of each conflict. Possible solutions include: a) rescheduling the evaluation, or b) preparing an alternative evaluation for that particular student, or c) shifting the weight normally assigned to the evaluation to the weight assigned to the remaining evaluation. When the instructor and student are unable to agree on suitable accommodation, the matter will be referred to the Associate Dean, who may request official documentation confirming the student's religious affiliation. The Associate Dean will convey the decision to the instructor and student. For undergraduate students in the Faculty of Education, the Executive Director Student Affairs should be contacted.

Grading for the course

Grading is based on guidelines presented in the McGill University Calendar:

A	85-100%
A-	80-84%
B+	75-79%
B	70-74%
B-	65-69%
C+	60-64%
C	55-59%
D	50-54%
F	0-49%

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Appendix A: Assignments (5 total = 45%)

Assignment #1: Research Philosophies (10%)

The purpose of this assignment is for students to think through their current research philosophies and to challenge themselves in their thinking about knowledge and research.

Question to answer: What is my research philosophy and why did I select that philosophy? How does it align with my research area, and how will that shape my research? Which other research philosophy would challenge my way of thinking about research and why?

Guidelines: 2 pages (excluding reference page), double space, ¾ margins, ID only on top right hand corner

Due date: September 14th, 2022 at 2:30pm on myCourses

Rubric (10 points): 1 point for respecting guidelines and writing clarity, 4 points for research philosophy rationale and how it shapes your research; 5 points for which other philosophy would challenge your way of thinking. I will be looking for a reflection process of the selection of research philosophy; the text is specific to the students and their research rather than a general understanding; the text does not contain definitions of paradigms; the text provides an in-depth reflection of one idea per section rather than listing many ideas (depth rather than breadth is covered).

Assignment #2: Database search, literature gaps, research question (10%)

The purpose of this assignment is to apply course content and lessons to identify an important area of research based on the literature and to write a strong research questions. It also provides students an opportunity to practice writing the background/context sections of scholarship applications. These applications are often between 1 to 2 pages (single space) for both background and methodology sections. Finally, the assignment provides students a starting point for the final assignment of this course: thesis proposal.

Tasks: (a) Conduct a literature search on a topic related to your thesis (or potential topic); (b) read between 5 to 10 articles identified in the literature search to identify important gaps and links between articles; (c) write a research question that would answer that gap.

Components: (a) a written report that summarizes the research and research gaps to set-up your research question (or questions). The report should be written as an introduction/background section of a scholarship application; (b) an appendix of the literature search conducted utilizing strategies for the class and database search (e.g., keywords, decision tree; screen shots of database search); (c) an appendix of the how you connected the studies and/or identified gaps (e.g., concept map, pictures of hand notes connecting studies; screen shots of notes)

Guidelines: (a) Report: 2 pages, double space (excluding reference page), ¾ margins, ID only on top right hand corner. (b) Appendices: ¾ margins, no page limit (note that I will not read the written report if it is beyond 2 pages).

Due date: October 5th, 2022 at 2:30pm on myCourses

Rubric (10 points): 1 point for respecting guidelines and writing clarity, 6 points for written report on its ability to present the information logically. The summary of the literature clearly sets-up the research question. The research question(s) meets expectations outlined in the class; 1.5 points for appropriate use of literature search tools/databases; 1.5 points for clear demonstration on how the studies interconnected.

Assignment #3: Ethics

The purpose of this assignment is to complete one of two ethics training certificates. This assignment will help you to pre-emptively consider the ethical components of your research. It may help identify the ethical considerations that you may need to speak with your supervisor. McGill (and some scholarships upon being awarded) also requires that researchers have an ethics training certificate.

Complete **one** of the following certificates:

TCPS Core 2: Course on research ethics <https://tcps2core.ca/welcome>

FRQ Tutorial in Research Ethics (complete Level 1 and Level 3 only)

<https://ethique.msss.gouv.qc.ca/didacticiel/?lang=en>

Tasks: (a) Complete one of the two research training certificates. If you have one of them, complete the other training certificate (date of completion should be no sooner than August 31st, 2022). If you have both prior to this date, please email me). I recommend you start the ethics training early as it can be lengthy to complete.

Components: (a) Submit one ethics certificate dated no earlier than August 31st, 2022.

Due date: October 26th, 2022 at 2:30pm on myCourses

Rubric: 5 points for submitting the certificate

Assignment 4: Methods section

The purpose of this assignment is to use the knowledge from class and/or your independent reading to identify the research design, sampling technique, and planned data analysis that is most appropriate for your proposed Master's thesis. It provides students the opportunity to practice writing parts of the methodology section that may inform your final assignment of this course and for scholarship applications.

Components: (a) Research question (can be copy-paste from previous assignment or modified if research question changed); (b) Write a research methodology section that contains your research design, participants (including sampling methods), procedures, measures/materials (if applicable), and planned data analysis. (b) In a separate section, provide a brief rationale as to the reason for selecting the research design, sampling, and data analysis (approximately ½ page).

Guidelines: Maximum 2.5 pages, double space, ¾ margins, ID only on top right hand corner

Due date: November 9th, 2022 at 2:30pm on myCourses

Rubric (10 points): 1 point for respecting guidelines and writing clarity, 6 points for written report on the required methodology sections. The sections should be written to the standard expected for scholarship applications where the quality should be to the level of a published manuscript. The research design, sampling, and data analysis should clearly align with the research question. Students should think about writing succinctly to ensure they include all components without going over the page limit.; 3 points for rationale that is based on research arguments/reasons (not because their supervisor told them).

Appendix B: Research Design and Approaches Presentation (15%)

The purpose of this assignment is to have students directly learn and teach one research design or approach. The active engagement in learning a research design and identify effective strategy to teach fellow students helps solidify one`s learning. It also provides students the opportunity to prepare for an oral presentation ahead of the research proposal presentation. By working in groups of 3 or 4, the students will be able to share responsibilities and learn to work within a team, as it often happens in research.

Components: (a) Identify a group of 3 or 4 classmates; (b) select a research design or approach from the list below or propose one to Prof Sweet by September 28th, 2022; (c) learn the design and approach; (d) prepare a 15-minute group presentation.

Guidelines: A 15-minute group presentation and 5 minutes of questions. All members of the group need to present at least 2 minutes. Presentation needs to include a summary of the research design and applied to an example related to kinesiology and physical education.

Due date: October 19th, 2022

Rubric (15%):

	Poor...	...Excellent	Total
Research design knowledge	No important information given, little understanding of the topic, content was unclear, was not able to answer questions	Important information presented and synthesized well, focused, research design/approach was well articulated, clear understanding of the topic, answers questions clearly and provides justification	/8
KPE related example	No example given or example was not related to KPE; Example was rushed and links to the topic and KPE were unclear.	Excellent example applied to the KPE context; links between research design/approach and KPE were strong; the example helped solidify student`s understanding of the topic	/5
Presentation style	No time spent preparing, too long/too short, no visuals, too fast/too slow	Appropriate length, preparation evident, visual representation of the paper topic, appropriate speed	/2

List of topics

Quantitative Designs and Approaches	Qualitative Designs and Approaches
Correlational	Interviewing
Mediators and moderators	Phenomenology
Time series design including Single subject designs	Case Study
Randomized controlled trials	Narrative Study
Within subject designs	Interpretative Phenomenology Analysis
Longitudinal research	Grounded Theory
Program evaluation including the RE-AIM framework	Methodological coherence
Meta analysis	Media analyses
Instrument/measures validity and reliability	Participatory action research
Feasibility and pilot studies	Types of content analyses
Blind and double blind experiments	Photo elicitation or scrapbooking
Multi (inter, trans) disciplinary research	Rigour and trustworthiness
Types of comparison groups (e.g., active control, attention control, placebo, etc)	Post-structural/post-modern/post-human paradigm

Appendix C: Research Proposal and Poster Presentation (40%)

Overview

A major portion of scientific advancement in kinesiology and physical education is developed through grant-funded programs of research. As graduate students in this area you will have access to funding opportunities in the form of scholarship, bursaries, grants-in-aid, and perhaps, standard research grants within your own area of academic interest. The purpose of this assignment is to provide you with an opportunity to develop your own research proposal for the purposes of addressing a topic that is of interest to you, and to present this proposal in the form of a research poster.

Research Proposal (20%)

All research proposal submissions will follow the protocol outlined below that is amended from the standard research funding programs at CIHR, SSHRC, and NSERC. Proposals should be for a typical Master's project in your area (i.e., one study). Each submission should not exceed 2 pages in length, use 12 times new roman font, 3/4 inch margins, include single-spaced lines, and where suitable include headings or subheadings to improve the transmission of information contained in the research plan. No cover page is required. Please include the student identification number in the header along with an abbreviated title for the research proposal. A separate page can be attached that includes only references used in the research summary. Students are asked to submit an electronic copy of this research proposal and poster (see below) by 11:30am on November 29th, 2021. This material will be evaluated using a pre-determined grading rubric.

Each submission should address the following areas within the space allotted:

1. **Background:** This section includes an overview of previous or related studies that inform the development of the research question(s) to be addressed within this plan of study. It provides the context of the proposed research including links to gaps in the existent knowledge base.
2. **Purpose, Research Question(s), and/or Hypotheses:** This section includes a clear and concise statement that illustrates the purpose of the work, the research question(s) to be addressed within the proposed plan of study, and expected outcomes (as appropriate).
3. **Methods:** This section describes the program of research undertaken to address the objectives outlined in the previous section. This section describes the study's methodology in detail including design, participants, measures/instruments, procedures (e.g., experimental and control conditions; qualitative data collection methods), and proposed analyses.
4. **Significance:** This section describes what is unique about the investigation, and the wider impacts the results of the proposed work are expected to have (e.g. public health, policy, treatment, prevention, etc.)
5. **References.**

Research Presentation (20%)

All students will be required to prepare a research poster in the format of a conference presentation. The material from the research proposal will be integrated into the poster, and the poster will serve as a guide for a 8-minute presentation (+ 2 minutes of questions). The verbal presentation of the pertinent information is graded based on the rubric provided. Both Prof Sweet and students will evaluate and grade the research presentations.

Grading Rubric for Research Proposal (Written)

	Poor...	...Excellent	Total
Title	Complex, unclear, uses unnecessary words, longer than 12 words, doesn't include the focus of the study	Brief, uses only important words, is drafted as single or double title, uses 12 words or less, includes the focus of the study	/1
Topic	Not feasible, resources would be difficult to gather, participants may not want to volunteer (benefits do not outweigh costs), not interesting to others	Feasible, participants would be willing to participate, resources are available, researcher is knowledgeable (or interested) in the topic, feasible, interesting to others	/1
Review of literature	Doesn't limit scope of inquiry, no scientific sources, no mentioning of other studies that address the problem, no deficiencies in previous literature highlighted, no importance of the study, the merits of quantitative and/or qualitative research methods are not considered, review does not focus on the major independent and dependent variables	Limits scope of inquiry, scientific sources are used and are complimentary, the problem is framed, integrative, Research problem identified, inclusion of studies that address the problem, deficiencies of previous research outlined, the importance of the study is made clear, review is appropriate based on the weight of the qualitative and/or quantitative components, is related to the major independent and dependent variables	/6
Research questions, objectives, hypotheses	Inconsistent with topic, purpose, and/or method; language inconsistent with method	Consistent with topic, purpose, and method; language consistent with method	/2
Methods	Not clear, not consistent with purpose/strategies/methods, no identification of measures, procedures not feasible, population not described, sampling technique not clear, research design not clear, analysis strategies not appropriate	Clear progression, consistent with purpose/strategies/methods, identification of measures, procedures are feasible (and ethical), population and sampling clearly described, research design clear and appropriate, analysis strategies are logical and consistent with methods/topic	/7
Analyses	Not consistent with hypotheses or research questions; not appropriate	Consistent with research questions and hypotheses; appropriate for method and research questions	/2
Writing style	Limited flow, no direction, spelling and grammar errors; inconsistent terminology used throughout, no coherence, few empirical references	Clear flow and direction, thoughts are easy to follow and link well between paragraphs, no spelling and grammar errors, consistent terminology used throughout proposal, coherent, many appropriate academic references	/1

Total marks: /20 (proposal)

Rubric: Presentation (total 20 marks)

	Poor...	...Excellent	Total
Material	No important information given, no summary, no focus, format unclear, not audience-specific	Important information presented and synthesized well, summarizes paper content, clear format, focused, easy to follow, audience-specific	/6
Topic knowledge	Demonstrates little understanding of the topic, little understanding of research methods; does not answer questions	Clear understanding of the topic, research methods are discussed appropriately; answers questions clearly and provides justification	/6
Presentation style	No time spent preparing, too long/too short, no visuals, too fast/too slow	Appropriate length, preparation evident, visual representation of the paper topic, appropriate speed	/3
Poster	No information provided in poster, poor design, no flow of ideas	Pertinent information is provided in poster, well-designed, clear and consistent with research proposal; flow of ideas	/5