Faculty of Education
Western University
B.Ed. Course Outline

Use of Education Research and Data Analysis
EDUC 5014Q
ONLINE
Course begins Monday October 17, 2016
Course closes Friday November 17, 2016

Instructor
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Robert Sandieson

Calendar Copy:
A practical approach to research methods for the classroom teacher with emphasis on sources of research relevant to teaching, evidence-based decision-making concerning programs and teaching strategies, critical appraisal of research, and the use of research to inform planning and assessment for individual students.

Learning Outcomes:
The following learning outcomes are in accord with the Standards of Practice for the Ontario College of Teachers.

Teacher candidates will:
1. learn how to access, interpret, evaluate and use educational research literature.
2. learn how to develop search strategies to locate evidence in research databases and the grey literature.
3. learn how to evaluate research using critical appraisal checklists.
4. learn how to bridge the research to practice gap using action research to apply research to their specific circumstances.
5. learn how to develop ideas for further research based on their personal teaching experiences.
Course Content:

(NOTE, if links don’t directly work from this page, try copying them and pasting into Google)

Week 1
Monday October 17- Friday October 21
Introduction to the course

Please read the details of the course as provided in this outline.

For this week, read the article:


Forum discussion:

Questions for this week to answer:

1. How can research inform educational practice and policy?

2. What are the limits of educational research?

As “inspiration” review the John Oliver video listed below.

https://www.youtube.com/watch?v=0Rnq1NpHdmw

Post your responses to the Forum in the course webpage. Forum will open on Monday October 17 at 8:00 and close on Friday October 21 at 18:00.

Week 2
Monday October 24- Friday October 28
Locating Research Information

Register with Student to Scholar Investigation and Organization

http://www.student2scholar.ca/

Review Module 3, parts A, B and C

Review the PowerPoint slide on searching the research literature listed in the Resource section of the course website.

Additional resource to view: Pearl Harvesting Search Thesaurus Wiki:

http://pearlharvestingsearchthesaurus.wikispaces.com/
Assignment

Go to the Western Library Home page and

Under the list for FIND,

Access the databases (click on Databases).

Perform the following searches within the specified database and answer the questions. Post your responses in the Assignments section of the course website.

1. Search the ERIC database using the terms “evidence OR control OR RTC OR quasi-experimental” of AND “learning style**”. How many citations were found?

2. Search the PsycINFO database for studies on the topic of school dropout in Ontario in the last 5 years. How many citations were found? What search terms did you use?

3. Search Google Scholar on the topic teaching students who have autism in the last 5 years. How many citations were found? What search terms did you use?

4. Search Google on the topic of school dropout in Ontario in the last 5 years. How many citations were found? What search terms did you use?

5. Search for peer reviewed articles on video-gaming and mathematics in Canada using the PsycINFO database. How many citations were found? What search terms did you use?

6. Find the following article: Thomas Hanson, Jo Ann Izu, Anthony Petrosino, Bo Delong-Cotty, Hong Zheng (2011). A Randomized Experimental Evaluation of the Tribes Learning Communities Prevention Program. Explain your attempt to locate it.

Forum discussion:

1. Was there anything new you learned from this week’s readings and exercises (just name three things if there was a lot)?

2. Did any further questions about literature searching arise for you that wasn’t answered in the materials?

**Week 3:**

*Monday October 31- Friday November 4*

Various types of research

There are many types of research designs and ways of conducting research. It is important that you have an awareness of the some of the basic ones.

For the following, search on the Internet for the meaning of terms listed below. The sources don’t have to be peer reviewed, but you should check more than one source since you may find different descriptions of the same topic.
Post your answers in the Assignment area of the course website. Please note that you should use your own words to explain these.

Reliability

Validity

Sampling

Statistical Effect size

Statistical Significance

Correlational research

Single case study research

Randomized controlled studies

Quasi-experimental design

Meta-analysis

Systematic review

Qualitative research

Action research

Evidence pyramid

Forum discussion:

What is EQAO; what is their intention? What sort of evidence is being used in EQAO? For example, do they reference meta-analyses and systematic reviews (the highest form of evidence), do they refer to peer reviewed studies, do they refer to text books (non-peer reviewed)? Can you find published data on the reliability and validity of the assessments they use?

Week 4:
Monday November 7- Friday November 11
Systematic Reviews: The foundation for evidence-based policy and practice:

Review the video:

https://www.youtube.com/watch?v=WB9pbHqUs5c

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Locate the CASP critical appraisal tool for systematic reviews

http://media.wix.com/ugd/ddd87_a02ff2e3445f4952992d5a96ca562576.pdf

Using the CASP checklist, evaluate the systematic review below.


Work in groups of three (choose your own groups) and post your responses in the Assignments section of OWL. Each person in the group will post a copy of the assignment, including the names of all in the group as well as their own name.

In the Forum section of the course website answer the questions:

1. What is the value of systematic reviews?
2. What are the limits of systematic reviews?

Class 5:
Monday November 14- Friday November 18

Action research

Action Research Guide for Alberta Teachers

Review the document:

http://www.teachers.ab.ca/SiteCollectionDocuments/ATA/Professional-Development/ActionResearch.pdf

read the article:

Siobhan Hudson Sarah Kadan Karen Lavin Tylita Vasquez (2010)

IMPROVING BASIC MATH SKILLS USING TECHNOLOGY


Assignment

Working in groups of three, outline an action research project that might be implemented by a teacher in the classroom. There is a one page maxim length limit (12 pont font, single spaced, 1` inch margins) – conciseness is important. Post your answers in the Assignment section of the course website. Each person in the group will post a copy of the assignment, including the names of all in the group as well as their own name.
Forum discussion:
How does action research fit into the overall use of evidence-based decision making in education?

Course Materials:
All materials are linked online. No textbook is required.

Assignments and Other Course Requirements:

Assignments:
There are four assignments in this course; weeks 2, 3, 4 and 5 (see outline above). They are worth 60% of the course grade (15% each). The Assignment section of the course website will open on the week’s Monday at 8:00 A.M. and close on the week’s Friday at 11:55 P.M.

Forum Discussions
There are Forum discussions every week. They are worth 40% of the total course grade (8% each). These will be graded pass/fail. It is expected that a contribution to each week’s discussion of at least 75 words will be done. Forum discussion will open on the week’s Monday at 8:00 A.M. and close on the week’s Friday at 11:55 P.M.
Policy Statements:

Accessibility: The University of Western Ontario is committed to recognizing the dignity and independence of all students and seeks to ensure that persons with disabilities have genuine, open and unhindered access to academic services. Please contact the course instructor if you require course materials in an alternative format or if any other arrangements can make this course more accessible to you. You may also wish to contact Services for Students with Disabilities (SSD) at 661-2111 x 82147 for information about requesting academic accommodation, or go to the following website: http://www.edu.uwo.ca/programs/preservice-education/documents/policies/Accessibility_Western.pdf

ATTENDANCE: The B.Ed. program is an intense and demanding programs of professional preparation. You are expected to demonstrate high levels of both academic and professional integrity. Such integrity is demonstrated in part by your commitment to and attendance at all classes, workshops, tutorials, and practicum activities. Read more about the Faculty’s attendance policy on-line: http://www.edu.uwo.ca/programs/preservice-education/Attendance%20Policy%202016.pdf

EXCUSED ABSENCES: If you are ill, require compassionate leave, or must miss classes for religious observance, your absence is excused; you will not be penalized but you are responsible for work missed.

UNEXCUSED ABSENCES: Any absence that is not a result of illness, bereavement, or religious observance is an unexcused absence. Three unexcused absences will result in you being referred to the Associate Dean and placed on academic probation. Any further unexcused absence will result in failure of the course and withdrawal from the program.

Language Proficiency: In accordance with regulations established by the Senate of the University, you must demonstrate the ability to write clearly and correctly. Work which lacks proficiency in the language of instruction is unacceptable for academic credit, and will either be failed or, at the discretion of the instructor, returned to you for revision to an acceptable level.

Late Penalties: Normally, the only acceptable reasons for late or missed assignments are illness (which you must report to the Teacher Education Office) or extreme compassionate circumstances. Unexcused late assignments will be penalized at a rate of 10% per day, and will not be accepted more than 5 days after the due date unless prior arrangements have been made with the instructor.

Academic Offences: Scholastic offences are taken very seriously in this professional Faculty. You are, after all, going to be a teacher. Read about what constitutes a Scholastic Offence at the following Web site: http://www.edu.uwo.ca/programs/preservice-education/documents/policies/WEB_ScholasticDiscipline.pdf

Plagiarism: Plagiarism means presenting someone else’s words or ideas as your own. The concept applies to all assignments, including lesson and unit plans, laboratory reports, diagrams, and computer projects. For further information, consult your instructors, the Associate Dean’s Office, and current style manuals. Advice about plagiarism and how to avoid it can also be found here: http://www.edu.uwo.ca/programs/preservice-education/documents/policies/WEB_PlagiarismPolicy.pdf

Plagiarism-Checking:
a. All required papers may be subject to submission for textual similarity review to the commercial plagiarism detection software under license to the University for the detection of plagiarism. All papers submitted for such checking will be included as source documents in the reference database for the purpose of detecting plagiarism of papers subsequently submitted to the system. Use of the service is subject to the licensing agreement, currently between The University of Western Ontario and Turnitin.com (http://www.turnitin.com)

b. Computer-marked multiple-choice tests and/or exams may be subject to submission for similarity review by software that will check for unusual coincidences in answer patterns that may indicate cheating.
Use of Laptops & Notebooks in Class: As a courtesy to members of the class, please put your cell phone on ‘vibrate’ or turn it off during class. Laptops and other electronic devices may be used in a professional manner to facilitate your activities in the course, but out of courtesy to colleagues and the instructor, please do not engage in personal networking and non-course communication during class time – save it for before or after class, or for the break.

SUPPORT SERVICES

A variety of support services are available at Western.

If you need advice or assistance, do not hesitate to get in touch with any of these services.

FINANCIAL ASSISTANCE: Registrarial Services (http://www.registrar.uwo.ca)

WRITING SUPPORT: Student Development Centre (http://www.sdc.uwo.ca/)

LEARNING SKILLS SUPPORT: Student Development Centre (http://www.sdc.uwo.ca/)

INTERNATIONAL STUDENTS: Student Development Centre (http://www.sdc.uwo.ca/)

ABORIGINAL STUDENTS: Student Development Centre (http://www.sdc.uwo.ca/)

STUDENTS with DISABILITIES: Student Development Centre (http://www.sdc.uwo.ca/)

SOCIAL & CULTURAL ISSUES: University Students’ Council (http://westernusc.ca/services/).

EMOTIONAL or MENTAL DISTRESS: Students who are in emotional or mental distress should refer to Mental Health @ Western http://www.uwo.ca/uwocom/mentalhealth/ for a complete list of options about how to obtain help.

B.Ed. PROGRAM ISSUES: zuber@uwo.ca, Teacher Education Office, room 1166

NEED HELP but not sure what to do: zuber@uwo.ca, Teacher Education Office, room 1166