EDUC 890 Class 2

Chapter 2 (Qualitative vs. Quantitative)

Some-thing Inter-esting

- To continue getting to know each other, please share with the class your name (again) and—briefly—something interesting you did or that happened to you since we last met!

Chapter 2

Quantitative and Qualitative Research Reports: Understanding Different Types of Study Reports

Quantitative

- Numbers
- Statistics
- Describes mathematical relationships between variables
- Addresses specific, narrow questions
- Uses words/terms like: experiment, correlation, survey, variables, factors, statistically significant

Qualitative

- Words
- Describes different perspectives and experiences in detail
- Addresses broad, general questions
- Uses words/terms like: phenomenon, thematic analyses, themes, patterns, interviews, focus groups, inductive, field notes, individuals' stories

Which kind are you more inclined to read?
Which kind are you more drawn to DO?
Why?

Combined research

- Researchers both explain variables *and* explore a phenomenon
- Data includes numbers and words
- E.g. in six daycare centres, interview teachers about their perceptions of physical activity *and* count the number of minutes each child is physically active throughout the day
- Often described as mixed-method or multiple methods

Why read both?

Quantitative

- Learn about specific concepts (variables) within large populations e.g.
  - Prevalence of something, such as child hunger, or support for Donald Trump
- Learn about relationships between variables, e.g.
  - poverty and school achievement; if an intervention causes changes in behaviour
- Learn what is prevalent; typical; what concepts are related; the causes of an intervention

Qualitative

- Learn about the complexity of issues, through individual experiences, e.g.
  - How it feels to be bullied;
  - How members of a rock band negotiate songwriting
- *Why* and *how* things are related, not just *that* they are related, e.g.
  - How a student experiences school when she struggles to feed herself and young siblings
- Unusual or unexpected responses in addition to the typical
- Learn about the meaning, complexity, and uniqueness of phenomena

Group work 1

- In pairs, do questions 1 and 2 on p. 75

Text book says…

- Smith et al. (2012):
  - focus on explaining variables (i.e., psychological well-being);
  - ask specific, narrow questions (i.e., what is the impact of social support on psychological well-being of mothers of adolescents and adults with ASD?);
  - collect data from a large number of participants (i.e., 269 mothers);
  - collect data consisting of numbers (i.e., scores assessed using an instrument);
  - analyze these numbers using mathematical procedures (i.e., determining high and lower levels and associations);
  - remain invisible (objective) in the written report (i.e., do not mention themselves).

Text book says…

- Tozer et al. (2013):
  - focus on exploring individuals' experiences (i.e., experiences of adults who have a sibling with autism);
  - ask broad, general questions (i.e., how do adults who have a sibling with autism give meaning to their family relationships?);
  - collect data from a small number of participants (i.e., 21 adult siblings);
  - collect data consisting of words (i.e., text from participants during semistructured interviews);
  - analyze these words using text analysis (i.e., a broad narrative approach); remain visible, present, and subjective in the written report (i.e., mention themselves as "we" and provide their interpretations of the meaning of the results).

Assign-ment 2

- Introductory components
- 10%
- Due Oct. 4 *(two weeks)*
- *http://benjaminbolden.ca/teaching/educ-890/*

Just wondering…any general questions about being a graduate student at Queen's Faculty of Ed?

Advisor/Supervisor

Steps in the research process

Quantitative vs. qualitative

Step 1—Identify a problem

Quantitative

- The need to explain relationships among variables
- The need to measure trends in a population
- *E.g. Xu et al. want to know about…*
  - *PA opportunities in middle schools and factors that influence them*
  - *Trends re: PA opportunities in middle schools*

Qualitative

- The need to explore a phenomenon because little is known about it
- The need for detailed description and understanding of a phenomenon
- *E.g. Tucker et al. want to know about…*
  - *Promoting PA of children in daycare*
  - *Daycare providers' practices or perspectives re: promoting PA*

Step 2—Review literature

Quantitative

- Remains static, reviewed mostly at start of research process
- Used to describe the direction of the study (purpose, research questions, hypotheses)

Qualitative

- Dynamic, reviewed at start but also as new ideas emerge throughout research process
- Informs researcher's perspective, but does not prescribe direction of study, i.e. researcher remains open to what participants identify as significant or important vis-a-vis the phenomenon

Step 3—Specify a purpose

Quantitative

- Specific and narrow
- Focused on measuring variables
- *E.g. Xu et al. purpose: to examine social and environmental factors that might interact with PA opportunities*

Qualitative

- General and broad
- Focused on individuals' perspectives about a phenomenon
- *E.g. Tucker et al. purpose:*
  - *To explore daycare providers' perspectives re: supporting PA for preschoolers*

Group work 2

- In pairs, find a research article that addresses an education topic of interest to you.
- Email me the *research purpose* – be as succinct as you can.
- Discuss whether the study is quantitative or qualitative and how you know.

Group work 2 results:

Research purpose statements

- The purpose of this study was to evaluate the influence of age (adult or child) and length of residence (LOR) in a second language speaking country (3 or 5 years) on the degree of foreign accent in a second language.
- To what extent pre-service teachers are aware of students' misconceptions, and what they experienced about identifying and working with misconceptions were of interest for this study.
- To understand the relationship between goals/beliefs, and peer influence on the motivation of adolescents.
- The purpose of this study is to explore how childrens' motivation is related to the amount and breadth of their reading.

Group work 2 results:

Research purpose statements

- **The Author aims to address issues of sex, sexuality, and gender in primary school "life-skills" lessons whilst providing suggestions for educators.**

Group work 2 results:

Research purpose statements

- This study sought to gain insight into how Ontario teachers define play-based learning, and how their perspectives affect its implementation in kindergarten classrooms.
- The purpose of this study was to extend past research by assessing the role of intrinsic, extrinsic and amotivational styles as predictors of future behavior using a prospective design
- We investigated grit and its relations with students' self-regulated learning (SRL) and academic achievement.
- The purpose of this study is to examine the research abilities and preferences of millennial legal researchers. This study examines whether traditional notions of finding legal rules with print digests and facts with computers searches is valid for modern researchers. It also assessed what effect a researchers previous experience with and opinion of a resource had on his or her ability to use it.

Step 4—Choose a research design

Quantitative

- Experimental design (e.g. explain impact of an intervention)
- nonexperimental design (e.g. correlational design, as in Xu et al.)

Qualitative

- General qualitative approach (as in Tucker et al.)
- Formal qualitative research design (e.g. ethnographic, narrative, case study, grounded theory, etc.)

Step 5—Select participants and collect data

Quantitative

- Collect info from a large number of participants, sites, or time points
- Use data collection instrument with preset questions and response options e.g. survey
- Gather numeric data

Qualitative

- Collect info from a small number of participants or sites
- Collect data with broad, open questions
- Gather word (text) or image data

Step 6—Analyze data & report results

Quantitative

- Statistical and graphical analysis procedures
- Compare groups, relate variables, describe trends

Qualitative

- Text and image analysis procedures (e.g. code text to identify patterns, categories, themes)
- Develop descriptions and themes

Step 7—Draw Conclusions

Quantitative

- Compare results with prior predictions and studies

Qualitative

- Provide statements about larger meaning of findings and personal reflections and interpretations of findings

Step 8—Disseminate and evaluate

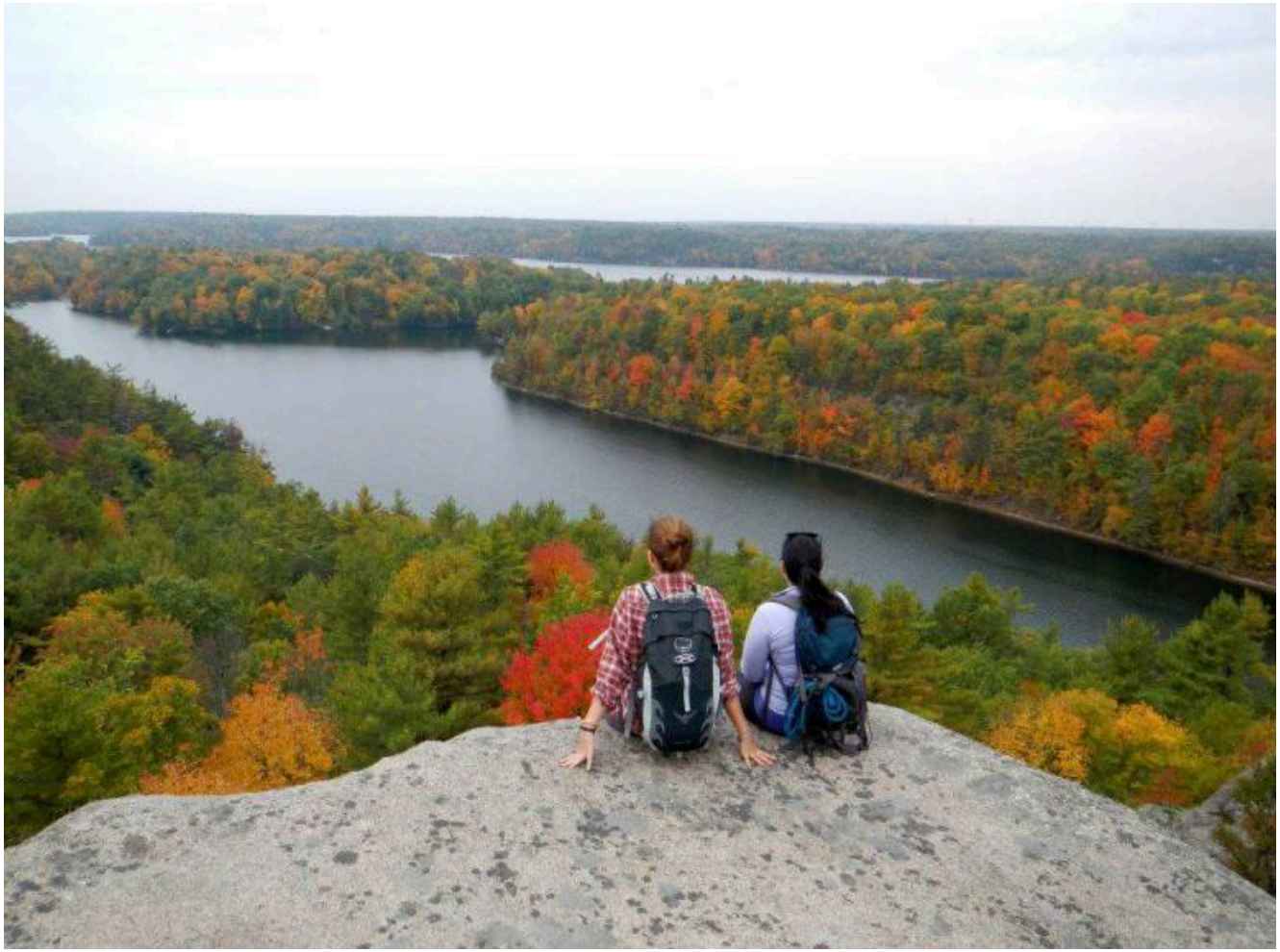
Quantitative

- Standard, fixed structures and evaluative criteria
- Objective and impersonal writing

Qualitative

- Flexible, emerging structures and evaluative criteria
- Subjective and reflexive writing
  - *Reflexivity is the process of examining both oneself as researcher, and one's relationship with the research, e.g. acknowledging one's biases and experiences and how they influence interpretations*

Homework



1. Go outside.
2. Read Chapter 3.
3. Find an article to use for assignment 2.
4. Read through assignment 2 description and exemplar and bring questions to next class.