EDEC/EDMS Research in Early
Childhood & Middle School Education
Fall 2004

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Office Hours By Appointment.

COURSE MEETING TIMES

Class will meet 5:00 – 7:30 pm on Wednesdays.

OVERVIEW

The purpose of this course is to explore how to evaluate literature and research relating to early childhood and middle school education. The overall goal is to develop skills in "intelligent consumerism of research". As such, the course will address topics such as locating research on a given topic, evaluating research reports, and interpreting research findings.

This course outline provides a general plan for the course; deviations may be necessary.

COURSE GOALS

•Understand the nature and purpose of educational research and how it relates to educational practice.

•Understand the different purposes and assumptions of the quantitative and qualitative paradigms of educational research.

•Understand the basic concepts and procedures involved in reviewing educational literature.

•Develop the ability to find, select, and interpret research articles relating to personal and/or professional interests.

REQUIRED READING

Fraenkel, J. R., & Wallen, N. E. (2003). How to design and evaluate research in education (5th ed.). New York: McGraw-Hill. You will need access to the CD-ROM or the Student Workbook in addition to the text.

American Psychological Association. (2001). Publication manual of the American Psychological Association. (5th ed.). Washington, DC: Author. See also http://www.apastyle.org/ which provides a general introduction and overview of common style issues.

Available CMC Reference, Main Library Reference & Reserve, and Science Library Reserve.

Other readings as assigned.

ACADEMIC HONESTY

All students are expected to conform to the UGA's Policies on Academic Honesty (http://www.uga.edu/ovpi/academic_honesty/sect04.htm) and to conform to the style guidelines and ethical standards set forth by the *American Psychological Association's Publication Manual*. Be sure to give proper credit, through references and citations, when you use someone else's work (their ideas as well as their words).

Unless otherwise stated in writing by the instructor all assignments and tests are to be completed without the assistance from other students. Students should complete the Interactive Activities independently and without reference to the answer key; they may refer to their textbook or notes.

ATTENDANCE AND PARTICIPATION

Attendance and participation are encouraged. Any student who incurs an excessive number of absences may be dropped from the course.

ASSIGNMENTS

All assignments are to be typed and should conform to the style guidelines contained in the Publication Manual of the American Psychological Association. **Late assignments will not be accepted**.

Interactive Activities: For each Chapter there are a number of Interactive Activities included in your student workbook (and available on-line or on the CD-ROM). You may complete up to 12 of these interactive activities over the course of the semester (turning in no more than 2 activities per class period). After completing an activity, you should check your answers using the answer key, correct your paper, and provide an analysis of any incorrect responses. Activities will be graded pass/fail.

Literature Critique: Students will identify a research topic of interest, conduct a literature search, and review one qualitative or quantitative research article. The literature search should be documented using Problem Sheet 5: Review of the Literature (p. 172, Student Workbook). Students should select an article related to their topic published in a peer-reviewed journal within the last

five years (e.g., American Educational Research Journal, Child Development, Developmental Psychology, Journal of Early Adolescence, Journal of Educational Research, Journal of Experimental Education, Journal of Research on Adolescence, Educational and Psychological Measurement, Journal of Educational Psychology, Research in Middle Level Education, Sociology of Education). You should clear your article with me prior to writing your critique. Review each article based on the attached Review Guidelines. Critiques should be 2 - 3 page narratives (not simply answers to each of the questions posed in the review guidelines). You will need to turn in two copies of your critique, article, and Problem Sheet 5 on November 13th (one copy for me and one copy for a classmate).

Peer Reviews: Each student will review a Literature Critique written by one of their classmates. The Peer Review should briefly identify the strengths and weaknesses of the Critique and should be supportive and constructive. Reviews should be 1 page. You will turn in your peer review and your classmate's materials on 12/4.

GRADING POLICY

Assignment/Exams

Points

Interactive Chapter Activities (up to 12 @ 10 each)

120

Literature Critique

200

Peer Review

100

Midterm Exam

300

Final Exam

300

Total

1020

A	>	899
B	=	800 - 899
C	=	700 - 799
D	=	600 - 699
F	<	600

Date

Topic & Readings

Assignment Due Dates

8/25

Chapter 1 The nature of educational research

9/1

Chapter 2 The research problem
Chapter 3 Variables and hypotheses

9/8

Chapter 4 Ethics and research
Chapter 5 Review of the literature

9/15

Chapter 6 Sampling
Chapter 7 Instrumentation

9/22

Chapter 8 Validity and reliability
Chapter 9 Internal validity

9/29

Chapter 10 Descriptive statistics

10/6

Chapter 11 Inferential statistics
Chapter 12 Statistics in perspective

10/13

Chapter 13 Experimental research
Chapter 14 Single-subject research

10/20

MIDTERM (Chapters 1 – 12)

MIDTERM

10/27

Chapter 15 Correlational research

11/3

Chapter 16 Causal-comparative research
Chapter 17 Survery Research

11/10

Chapter 18 The nature of qualitative research

Literature Critique (turn in 2 copies of critique and article)

11/17

Chapter 19 Observation and interviewing
Chapter 20 Content analysis

11/24

HOLIDAY

12/1

Chapter 21 Ethnographic research

Peer review

12/8

Chapter 23 Action research

12/17

FINAL (Chapters 13-23) 3:30-6:30

*FINAL

*The Final is scheduled for noon on 12/17. I am willing to change this exam time to accommodate your working schedules however we will all need to agree on a new date and time. Please review the Final Exam schedules and project due dates for your other classes so that we can discuss rescheduling on 9/8.

Review Guidelines for a Qualitative Research Report

Introductory Section

1. Are the research problems, procedures, or findings unduly influenced by the researchers' institutional affiliations, beliefs, values, or theoretical orientation?
Information usually needed: Find the researchers' institutional affiliation. (This information usually appears beneath the title of the report or at the end.) Also locate any information in the report that indicates their beliefs about education, values, or theoretical orientation.
Example: The researchers taught in inner-city schools for many years before doing this study. This experience would give them empathy for inner-city students but also some possible biases about what their typical problems are. Were the researchers able to stay free of preconceptions during data collection?

2. Do the researchers demonstrate undue positive or negative bias in describing the subject of the study (an instructional method, program, curriculum, person, etc.)?
Information needed. Identify any adjectives or other words that describe an instructional method, program, curriculum, person, and so on in clearly positive or negative terms.
Example. The researchers used a qualitative research method know as educational criticism to study a high school football team. This method is inherently evaluative, so it is no surprise that the researchers made many judgments--both positive and negative--about the impact of the team on individual players.

3. Is the literature review section of the report sufficiently comprehensive? Does it include studies that you know to be relevant to the problem?
Information needed. Examine the studies mentioned in the report. Note particularly if a recent review of the literature relevant to the research problem was cited or if the researchers mentioned an effort to make their own review comprehensive.
Example. The researchers completed their literature search prior to data collection. This procedure is not desirable because questions and hypotheses were bound to arise as they collected data. They should have done an ongoing literature search to find out what others have found concerning these emerging questions and hypotheses.

Research Procedures

4. Did the sampling procedure result in a case or cases that were particularly interesting and from whom much could be learned about the phenomena of interest?
Information needed. Identify the procedures that the researchers used to select their sample.
Example. The researchers used purposive sampling to select a high school principal who had received several awards and widespread recognition for "turning her school around". She was an excellent case to study, given the researchers' interest in administrators' instructional leadership.

5. Was there sufficient intensity of data collection?
Information needed. Identify the time period over which an individual, setting, or event was observed and whether the observation was continuous or fragmented. If documents were analyzed, identify how extensive the search for documents was and how closely the documents were analyzed.
Example. The researchers' goal was to learn how elementary-school teachers established classroom routines and discipline procedures at the beginning of the school year. They observed each teacher every day for the first three weeks; this is a good procedure. They assumed, however, that routines and discipline procedures would be explained at the start of the school day, and so they observed only the first hour of class time. The validity of this assumption is questionable.

6. Is each measure in this study sufficiently valid for its intended purpose?
Information needed. Examine any evidence that the researchers presented to demonstrate the validity of each measure in the study.
Example. The researchers' primary measure was ethnographic observation. They appear to have taken careful notes and studied them extensively prior to writing their ethnographic report. They checked the validity of their statements in the

report by having several knowledgeable people in the community they studied review the statements.

7. Is each measure in the study sufficiently reliable for its intended purpose?
Information needed. Examine any evidence the researchers presented to demonstrate the reliability of each measure in the study.
Example. The researchers acknowledged the difficulty of determining the reliability of their interviews. Their main concern was whether the interviewees were taking the interviews seriously. They collected data about this possible problem by asking the interviewees several of the same questions on different occasions to see if the responses would be similar. By and large they were.

8. Is each measure appropriate for the sample?
Information needed. Determine whether the researchers reported the population for whom the measure was developed.
Example. The researchers used the interview method but noted that children in the culture they studied are very uncomfortable with adults asking them questions in a formal setting. The researchers made the children more comfortable by setting up a play-like environment and asking them questions unobtrusively as the interviewer and children played.

9. Were the research procedures appropriate and clearly stated so that others could replicate them if they wished?
Information needed. Identify the various research procedures that were used in the study and the order in which they occurred.
Example. The researchers' main data collection procedure was to ask students questions as they attempt to solve various math problems. The problems and questions are available upon request, so it seems that the study could be replicated.

Research Results

10. Did the report include a thick description that brought to life how the individuals responded to interview questions or how they behaved?
Information needed. Identify how much vivid detail was included in the account of what the individuals being studied did or said.
Example. The researchers identified 10 main strategies that mentor teachers used in working with beginning teachers. Unfortunately the strategies were described in rather meager detail, with no examples of what they looked like in practice.

11. Did each variable in the study emerge in a meaningful way from the data?
Information needed. Identify all the variables (also called constructs) that were discovered in the study. For each variable, examine how it emerged from the data.

Example. The researchers did a careful content t analysis of what the students said in the interviews. They looked for repetitive themes in their comments. These themes were the variable. The researchers did a nice job of labeling these variables by using words that the students themselves used.

12. Are there clearly stated hypotheses or questions? And do they emerge from the data that were collected?
Information needed. Identify each research hypothesis and question stated in the report. Examine whether and how they emerged from the data.
Example. The researchers focused almost entirely on writing a narrative account of the events leading up to the teachers' strike. There was no attempt to develop hypotheses about why these events happened, so that these hypotheses could be tested in subsequent research.

13. Were appropriate statistical techniques used, and were they used correctly?
Information needed. Identify any statistical technique described in the report.
Example. The researchers studied three teachers' aides and made such comments as "They spend most of their time helping individual children and passing out or collecting papers." Time is easily quantified, so the researchers should have collected some time data and reported means and standard deviations.

14. Were multiple sources of evidence used to support the researchers' conclusions?
Information needed. Identify the researchers' conclusions and how each of them was supported by the data analyses.
Example. The researchers concluded that textbook adoption committees were frustrated by the paucity of written information provided by publishers and their inability to question publishers' representations in person. This frustration was documented by analysis of interviews with selected members of the textbook adoption committees, field notes made by the researchers during committee meetings, and letters written by the chair of the committee to the director of textbook adoption in the state department of education.

15. Did the researchers provide reasonable explanations of the finds?
Information needed. Identify how the researchers explained the findings of the study and whether alternative explanations were considered.
Example. The researchers found that peer coaching did not work at the school they studied, and they attributed its failure to the lack of a supportive context, especially the lack of a history of collegiality among the teaching staff. Another plausible explanation, which they did not consider, is that the teachers received inadequate training in peer coaching.

16. Was the generalizability of the findings appropriately qualified?

Information needed. Identify whether the researchers made any statements about the generalizability of their findings. If clams of generalizability were made, were they appropriate?
Example. The researchers made no claims that the results of their case study could be generalized to anyone other than the teacher who was studied. It is unfortunate that they did not discuss generalizability, because the findings have significant implications for practice if in fact they apply to other teachers. There are not enough data about the teacher's professional training for readers to generalize on their own.

17. Did the researchers draw reasonable implications for practice from their findings?
Information needed. Identify any implications for practice that the researchers drew from their findings.
Example. The researchers found that students who volunteer for community service derive many benefits from the experience. Therefore, they encourage educators to support community service programs for their students. This recommendation seems well grounded in their findings about benefits of community service participation for students.

Review Guidelines for a Quantitative Report

1. Are the research problems, procedures, or findings unduly influenced by the researchers' institutional affiliations, beliefs, values, or theoretical orientation?
Information needed. Find the researchers' institutional affiliation. (This information usually appears beneath the title of the report or at the end.) Also locate any information in the report that indicates their beliefs about education, values or theoretical orientation.
Example. Most of the researchers' prior work has advocated cognitive models of learning. Therefore, they may have biased their experiment so that the cognitively oriented teacher method came out better than the behaviorally oriented teaching method.

2. Do the researchers demonstrate undue positive or negative bias in describing the subject of the study (an instructional method, program, curriculum, person, etc.)?
Information needed. Identify any adjectives or other words that describe an instructional method, program, curriculum, person, and so on in clearly positive or negative terms.
Example. The researchers described the group of students as difficult to handle, unmotivated, and disorganized. No evidence was presented to support this characterization. This description in the absence of evidence may indicate a negative attitude toward the children who were studied.

3. I the literature review section of the report sufficiently comprehensive? Does it include studies that you know to be relevant to the problem?
Information needed. Examine the studies mentioned in the report. Note particularly if a recent review of the literature relevant to the research problem was cited or if the researchers mentioned an effort to make their own review comprehensive.
Example. The researchers stated the main conclusions of a previously published comprehensive literature review on the instructional program that they intended to study. They demonstrated clearly how their study built on the finds and recommendations of this review.

4. Is each variable in the study clearly defined?
Information needed. Identify all the variables (also called constructs that were studied. For each variable, determine f and how it is defined in the report.
Example. One of the variables in is intrinsic motivation, which is defined in the report as the desire to learn because of curiosity. This definition is not consistent with other definitions, which state that intrinsic motivation is the desire to learn because of the satisfaction that comes from the act of learning and from the content being learned.

5. Is the measure of each variable consistent with how the variable was defined?
Information needed. Identify how each variable in the study was measured.
Example. The researchers studied self-esteem but did not define it. Therefore, it was not possible to determine whether their measure of self-esteem was consistent with their definition.

6. Are hypotheses, questions, or objectives explicitly stated, and if so, are they clear?
Information needed. Examine each research hypothesis, question, or objective stated in the report.
Example. The researcher stated one general objective for the study. It was clearly stated but did not give the reader sufficient understanding of the specific variables that were to be studied.

7. Do the researchers make a convincing case that a research hypothesis, question, or objective was important to study?
Information needed. Examine the researchers' rationale for each hypothesis, question or objective.
Example. The researchers showed how the hypothesis to be tested was derived from a theory. They also showed that if the hypothesis was confirmed by the study it would add support to the validity of the theory, which is currently being sued in the design of new reading curricula.

Research Procedures

8. Did the sampling procedures produce a sample that is representative of an identifiable population or of your local population?
Information needed. Identify the procedures that the researchers used to select their sample.
Example. The researchers selected several classes (not randomly) from one school. The only information given about the students was their average ability and gender distribution. I cannot tell from this description whether the sample is similar to students in our schools.

9. Did the researchers form subgroups to increase understanding of the phenomena being studied?
Information needed. Determine whether the sample was formed into subgroups, and if so, why?
Example. The researchers showed the effects of the instructional program for both boys and girls; this information was helpful. However they did not show the effects for different ethnic subgroups. This is an oversight because the program may have a cultural bias that could have an adverse effect on some ethnic subgroups.

10. Is each measure in the study sufficiently valid for its intended purpose?
Information needed. Examine any evidence that the researchers presented to demonstrate the validity of each measure in the study.
Example. The XYZ test was used because it purportedly predicts success in vocational training programs. However, the researchers presented evidence from only one study to support this claim. That study involved a vocational training program that was quite different from the one they investigated.

11. Is each measure in the study sufficiently reliable for its intended purpose?
Information needed. Examine any evidence that the researchers presented to demonstrate the reliability of each measure in the study.
Example. The researchers had observers rate each student's on-task behavior during Spanish instruction in a sample of 30 classrooms. Interobserver reliability was checked by having pairs of observers use the rating system in the same 5 classrooms. The pairs typically agreed on 90 percent of their ratings, which indicates good reliability.

12. IS each measure appropriate for the sample?
Information needed. Determine whether the researchers reported the population for whom the measure was developed.

Example. The ABC Reading Test was developed 20 years ago for primary grade students. The current study also involves primary grade students, but the test may no longer be valid because students and the reading curriculum have change so much over the past 20 years.

13. Were the research procedures appropriate and clearly stated so that others could replicate them if they wished?
Information needed. Identify the various research procedures that were used in the study and the order in which they occurred.
Example. The researchers administered three research tests during one class period the day before the experimental curriculum was introduced. The tests, though brief, may have overwhelmed the children so that they did not do their best work. Also, some aspects of the experimental curriculum (e.g., the types of seatwork activities) were not clearly described, and the researchers did not indicate how soon the final research tests were administered after the curriculum was completed.

14. Were appropriate statistical techniques used, and were they used correctly?
Information needed. Identify any statistical techniques described in the report.
Example. The researchers calculated the mean score for students' performance on the five tests that were administered. However, they did not give the range of scores (i.e., lowest score and highest score). This would be helpful information because they studied a highly heterogeneous group of students.

Discussion of Results

15. Do the results of the data analyses support what the researchers conclude are the findings of the study?
Information needed. Identify what the researchers considered to be the major findings of the study.
Example. The researchers concluded that the experimental treatment led to superior learning compared to the control treatment, but this claim was true for only two of the four criterion measures used to measure the effects of the treatments.

16. Did the researchers provide reasonable explanations of the findings?
Information needed. Identify how the researchers explained the findings of the study and whether alternative explanations were considered.
Example. The researchers concluded that the narrative version of the textbook was less effective than the traditional expository version. Their explanation was that the story in the narrative version motivated students to keep reading, but at the same time it distracted them from focusing on the factual information that was

included on the test. They presented no evidence to support this explanation, although it seems plausible.

17. Did d the researchers draw reasonable implications for practice from their findings?
Information needed. Identify any implications for practice that the researchers drew from their findings.
Example. The researchers claimed that teachers' morale would be higher if administrators would provide more self-directed staff development. However, this recommendation is based only on their questionnaire findings that teachers expressed a desire for more self-directed staff development. The researchers are not justified in going from this bit of data to the claim that teachers' morale will improve if they get the kind of staff development they prefer.

Review Guidelines are taken from Borg, W. R., Gall, J. P., & Gall, M. D. (1993). Applying educational research. New York: Longman.