ERMA 7210

Theory and Methodology of Qualitative Research¹

Auburn University - College of Education Department of Educational Foundations, Leadership, & Technology Summer 2011

1. <u>Class Time:</u> Tuesdays/Wednesdays, 4:00 – 7:50 p.m. Location: Haley Center, Room 1454/Room 2204

Instructor: Carey E. Andrzejewski

334.844.3012 dr.a@auburn.edu

Office Hours: Tuesdays and Wednesdays 1:30-4:00pm

and by appointment

Credit Hours: 3 semester hours

<u>Prerequisites</u>: N/A

2. Date Syllabus Prepared: May 2011

- **3. Special Accommodations**. Any participant needing special accommodations should contact Dr. Kelly Haynes, Director of the Program for Students with Disabilities, located in 1244 Haley Center, Telephone: 334-844-2096 (Voice/TDD). Office Hours: 7:45 –1145 a.m. and 12:45 4:45 p.m.
- **4.** Required Materials: [1] Creswell, J. (2006). Qualitative inquiry and research design: Choosing among five approaches (2nd ed). Thousand Oaks, CA: Sage. [2] Schwandt, T. A. (2007). The SAGE dictionary of qualitative inquiry (3rd ed.). Thousand Oaks, CA: Sage. [3] Web access. You must have access to a web browser, and you must check your email accounts (Tiger Mail and Blackboard) several times a week. [4] Supplementary resources will be provided by the instructor via Blackboard or in class. [5] Patience, time management, and a sense of humor (This course is time-intensive. I encourage you to consider your schedule before deciding to commit to this class.).
- 5. Course Description: This course is designed to give you an overview and introduction to the historical and theoretical underpinnings of qualitative inquiry in educational settings. We will also compare and contrast the assumptions, design, and methods of difference "schools" of qualitative inquiry. The primary purposes of the course are to 1.) introduce you to the founding and prevailing principles and paradigms of qualitative inquiry; how these have been used to describe social phenomena; and their underlying assumptions; 2.) critique the limits and possibilities of the various paradigms of qualitative research; 3.) help you become "good consumers" of qualitative research; and 4.) give you an opportunity to begin honing your skills as qualitative researchers.

______ This syllabus is based on syllabi by Daniel Henry Teffrey Brooks. Antoi

¹ This syllabus is based on syllabi by Daniel Henry, Jeffrey Brooks, Antoinette Errante, Ron Chenail and Aaron Kuntz.

- **6.** <u>Course Objectives</u>: Upon completion of this course, you will be able to:
 - Discuss the theoretical traditions undergirding qualitative research;
 - Discuss the relationship between theory and research;
 - Discuss the strengths and limitations of various approaches to qualitative inquiry;
 - Discuss the strengths and limitations of various techniques and procedures for collecting and analyzing qualitative data;
 - Discuss the strengths and limitations of various forms of writing up qualitative data;
 - Assess the quality of qualitative research; and
 - Conduct qualitative research.
- 7. <u>Course Format</u>: The class meetings will include small group discussions, class discussions, lectures, and student presentations. It is important to the collective enterprise that students keep current with the assigned readings, attend class meetings, and participate in the discussions as informed members. Your participation will ensure that our time together will be productive and worthwhile.

8. Course Requirements and Evaluation (see weekly schedule for due dates):

- **A. Reader's Questions:** Two questions are due each week based on the assigned readings. Please type your questions and do your best to keep them brief. The questions should be genuine; that is, *questions for which you do not have an answer*. They should also be as focused as possible and specific to the readings. As you read, ask yourself: Is there anything puzzling about what the author is saying? Is any of the terminology confusing? What don't I understand? What particular points would I like to know more about? These questions, which I will collect and return on a weekly basis, will also be discussed in class. Although not graded per se (only as part of the participation grade), questions for all the readings are a course requirement. At its heart, research is asking questions.
- **B.** Facilitating Article Discussion: For one of the empirical readings for class, you will be asked to facilitate the class discussion about its practical, theoretical, and methodological merits and flaws. It will be helpful to use the CASP tool (See Appendix A) as a starting place. This assignment will be assessed based on the degree to which your critique and the accompanying discussion is thorough; thoughtful; grounded in your growing understanding of qualitative research methodology; and responsive to the questions and comments of your classmates. This assignment is intended to be formal in the sense that you will need to be prepared to summarize the article and your assessment of it, but informal in the sense that you will *not* need to create a powerpoint presentation, write a formal paper, or the like. Your task is to *lead* our *discussion* about the article.
- C. Article Critique Portfolio: As a researcher it will be critical for you to collect, read, and assess published reports including ones employing qualitative research methods. Reading such papers can help you 1.) identify relevant evidence that can guide your practice, 2.) appreciate the utility of qualitative research when it comes to studying various topics related to educational leadership, and 3.) select appropriate methods to address your own research questions.

When you locate pertinent research papers, it is critical that you can assess the quality of these published accounts and synthesize your understandings of these sources. This objective can be even more challenging in qualitative research given the variety of methodologies, styles, and philosophical approaches, as well as the uneven nature of the quality of some published results. To help you to develop a critical eye for evaluating qualitative research you will be asked to appraise the quality of five qualitative research articles from *your* field: one from each of the five approaches discussed on class and outlined in Creswell's text. To help you in discerning the quality of your chosen papers, you will use the Modified Critical Appraisal Skills Programme's (CASP) *Making Sense of Evidence Tool: 10 Questions to Help You Make Sense of Qualitative Research* (see www.sph.nhs.uk/sph...appraisal-tools/Qualitative%20Appraisal%20Tool.pdf for the original, the modified version is included in Appendix A). You will need to submit a copy of the first page of each article along with your appraisal, which should directly follow the format outlined in Appendix A.

- D. Observation and/or Interview Study Proposal and Pilot: Conduct an interview or observation pilot study. You have the requirement and the opportunity to experience doing fieldwork. I hope that you will engage with this project in ways that fulfill Shulamit Reinharz's three criteria for worthwhile research: 1.) Contribute to substantive area of inquiry, 2.) flesh out your understanding of what it means to do "postpositivist" research (Don't worry if you don't know what this means. You will.), and 3.) learn about yourself as a researcher—that is, be reflexive about methodological learning and ongoing questions. (Reinharz, S. (2002). *On becoming a social scientist*. New Brunswick, NJ: Transaction Publishers.)
 - 1. <u>CITI Training.</u> Online ethics in research training required by the university before your begin conducting research with human or animal subjects. **Your CITI training must be completed by May 31/June 1. Please bring a copy or your completion certificate to class.**
 - 2. <u>Evolving 'Elevator' Speech</u>. During the first class, you will create and deliver an 'elevator' speech about what it is you most want to know (i.e., a burning question you have about your field or environment). During weeks two, three, and four, you will work on revising that speech so that it grows into a question researchable through qualitative means. I encourage you to think about your 'elevator' speech through the lenses of the five research traditions we will read and talk about (see Creswell, 2007). I also encourage you to give thought to the tradition that is best aligned with what you want to know and your way of viewing the world. Once you have settled on a tradition, you will want to begin drafting your proposal. Your elevator speeches will not be graded, but they will help you to move from an initial research idea to a doable research design, as outlined in your proposal.
 - 3. <u>Letter of Intent</u>. A letter outlining what it is you want to know and how you plan to answer your questions. Think of this as a pre-proposal proposal and evolution of your elevator speech. It should be addressed to me and be not more than two pages. It should identify your research question or problem (1-3 sentences), provide a brief explanation

regarding why this is important to you and/or your field (not more than 1 paragraph), briefly describe the method you plan to use to collect your data (i.e., observation or interview; 1-2 sentences) as well as the appropriate context in which to collect your data (i.e., from whom, where, at what time, etc.; 1-4 sentences), and a fieldwork calendar. Be sure your calendar leaves you adequate time to collect and analyze your data and prepare your presentation. Your letter of intent is due June 28/29.

4. <u>Reflexive Journal / Audit Trail.</u> This semester, you will be asked to keep a reflexive journal / audit trail. Although you may keep these two documents in one place and organize them chronologically, they serve different purposes. The reflexive journal will be a place for you to document your methodological learning — What have you come to understand about research practice and yourself as a researcher? I encourage you to make notes here about your experiences before, during, and after each phase of the research process. You may also record responses to class sessions and readings here. Feel free to use a personal tone; after all, this is about you (see Appendix B for more guidelines.).

Your audit trail, on the other hand, will be less personal as it is a place to document what you have done — what data did you collect, from/with whom, when, where, etc? This is also a place to keep track of how your research question and proposed design have evolved. That is, your audit trail may contain several drafts of these. It should also contain the materials/data you collect as well as a one-page schedule of your fieldwork experiences. Much of this will come directly from/lead directly to your letter of intent.

This assignment will be assessed based on the degree to which it is complete, comprehensive, and detailed and the extent to which it reveals your own thinking and growth as a researcher. You will turn it in on the last day of class, July 26/27.

5. Proposal and Pilot Presentation. A conference-style, not-more-than-12-minute (This means you will be penalized for using more than 12 minutes.) presentation of your proposed study describing its main features, results of your pilot study, and your methodological learning. The description of its main features should include: a definition of your topic and brief rationale, the key assumptions you are making about this topic, your research questions or problem, what methods you will use to gather information and specifically how you plan to use these methods (e.g., number and length of observations or interviews). The description of the pilot study should outline how your pilot relates to the larger proposed study, the nature of the data you collected, and your preliminary findings. Your description of your methodological learning should focus on the following: What did you learn from conducting the pilot that will shape your conduct of the full study, and what have you learned about yourself as a researcher and about the conduct of qualitative research (See Appendix B for more detail)?

My advice is to organize the 12 minutes in the following way: approximately four minutes to 1.) introduce and describe the proposed study 2.) share your pilot data and discuss preliminary findings and implications for future practice and research, and 3.)

share your methodological learning and lingering questions. This assignment will be assessed based on the following criteria: a) clarity and rationale of the research question(s), b) explanation of methods and approach and their alignment with the research question(s), c) clarity and appropriateness of the pilot study, d) coherent and warranted initial analyses and conclusions, e) level of preparation (i.e., attractiveness and usefulness of presentation materials), and f) reflexive analysis. Please plan to give your presentation in a manner consistent with paper presentations as scholarly conferences. Presentations will be given on July 26/27.

Task	Points Possible
CITI Training	-
Evolving 'Elevator' Speech	-
Letter of Intent	5
Reflexive Journal/Audit Trail	25
Proposal and Pilot Presentation	25
TOTAL	55

E. Proposal and Pilot Presentation Response: All researchers need feedback in order to improve their work. In the spirit of encouraging you to seek feedback from each other, each of you will be assigned as a respondent for a classmate's proposal and pilot presentation. Respondents will be responsible for using the CASP tool (Appendix A) to provide feedback about the presentations.

Respondents, please keep in mind that the proposals and pilot presentations represent works-in-progress rather than completed studies (such as those that have been published in peer-reviewed journals). Some of the questions may not be relevant or helpful in this context. Please use your professional judgment to make as assessment about which items will be most helpful to your classmate. I also encourage you to think about three things as your complete the feedback/assessment tool: 1.) What are the strengths of the proposal; on what should your classmate continue to build? 2.) What changes do you recommend? And 3.) What should your classmates think about next; what are the next steps in terms of refining the question and design, data collection, data analysis, and writing? This assignment will be assessed based on the degree to which your response is thorough, thoughtful, grounded in the presentation and your growing understanding of qualitative research methodology, and useful (i.e., it will help your classmate advance their scholarly agenda).

9. Final Grade:

Assignment	Points Possible	
Facilitating Class Discussion	5	
Article Critique Portfolio	25	
Observation and/or Interview Study Proposal and Pilot	55	
Proposal and Pilot Presentation Response	5	
Attendance, Attitude, and Class Participation (including reading questions)	10	
TOTAL	100	

The rubric for participation is as follows:

Students who obtain a participation grade of "A" will those who come to class prepared and are constantly seeking to share experiences and engage professionally in interactions with the class. In addition, these people will seek to test her/his ideas against her/his colleagues. An "A" grade means all homework/discussion assignments are completed.

Student receiving a "B" will be prepared and active within the class, but at times take less than a leadership role in pursuing issues that arise.

\mathbf{C}

Students receiving a "C" will play an inconsistent or limited role in the life of the class.

content

course content

D/F

The grades of "D" or "F" will be given to those students not regularly participating in class discussions/activities or consistently unprepared for class.

Grading Scale

59.5 to 69.45%

Below 59.5%

C

D

F

Percentages Letter Grade Quality of Work Outstanding performance; excellent command of course 89.5 to 100% Α content 79.5 to 89.49% В Good performance; good command of course content 69.5 to 79.49% Satisfactory performance; average command of course

Marginal performance; below average command of

10. Course Policies:

- A. <u>Professionals show up on time and prepared every day for work.</u> Yes, professionals occasionally have to take sick days (or personal days), but the best are always there. If you have to miss a class, you will be responsible for the notes, assignments, and other duties that have been discussed.
- B. <u>Professionals complete assignments on time.</u> Assignments are due in class on the date given. Assignments handed in after this time will be considered late. Late assignments will be penalized by 10% per day.
- C. <u>Professionals use appropriate means for discussing disagreements.</u> If you don't understand something, ask during class. If you still don't understand, email, phone, or catch me in the building. If you think you deserve a different grade, please contact me within 48 hours. Please don't be so unprofessional as to take class time to discuss grades or other points of contention.
- D. <u>Professionals take responsibility for their own learning.</u> That said, my purpose is to help class members become the very best they can possibly become at this point in their professional development. Please allow me to assist in any way possible including, but certainly not limited to: listening, providing feedback, answering questions, sharing and addressing concerns, brainstorming, clarifying course content or expectations, and mediating or facilitating work with collaborating peers. Always feel free to contact me by phone or by email. However, email is probably not the fastest way to get a response from me. If you contact me via email, allow two days response time. So, if you have an urgent concern or question, it is best to contact me by phone.
- E. <u>Professionals give credit where credit is due.</u> The University Academic Honesty Code and the Tiger Cub Rules and Regulations pertaining to Cheating will apply to this class. See also <u>Tiger Cub</u> for rules on academic honesty. Written assignments that include material that is similar to that from course reading materials or other sources should include a citation including source, author, and page number. Quotation marks should be used if the material is copied directly from the readings and text citations should be used (Author, year, page). If the material is paraphrased, (Author, year) should appear immediately following the paraphrased material. Failing to do so constitutes violation of the Auburn University Academic Honesty Code. In addition, written assignments that are similar or identical to those of other students in the class (past or present) is also a violation of the Code. Violations of the Auburn University Academic Honesty Code will be treated according to university policy. Rewriting and resubmission is not an option.

 Finally, you may not submit the work of someone else or work that you have
- submitted for another class to satisfy a requirement of ERMA 7210.

 E. Professionals understand that teaching and learning are ongoing processes for a
- F. Professionals understand that teaching and learning are ongoing processes for everyone. There are things I haven't thought of here. Understand that I am learning along with you and your classmates. Please help me take a collaborative approach to solving any problems that may arise.
- G. <u>Professionals make others aware of what they need to be successful.</u> Please inform me within the first week of class if you require adaptations or modifications to any assignment because of special needs (disabilities, religious observances, and so on).

Weekly Schedule

Date			A C C + C + 12 + 12 A C + 12 A C
1. May 24/25	Dictionary Terms Auditing	Readings Creswell Chapters 1, 2, and 6	Assignments
Introduction:	Methodology	Creswell Chapters 1, 2, and 6	
What is a	Modernism/		
paradigm	Modernity		
anyway?	Objectivity		
arry way:	Paradigm		
	Positivism		
	Postmodernism		
	Postpositivism		
	Subjectivity		
2. May 31/June 1	Ethics of	Creswell Chapter 4, pp. 53-62	CITI training
Narrative and	qualitative	Creswell Chapter 10, pp 213-216	
Phenomenological	inquiry	Narrative Exemplars: Choose one	Narrative and
Research	Informed consent	Drago-Severson & Pinto (2009)*	Phenomenological
	Institutional	Wrushen & Sherman (2008)*	Article
	review board	Blackbeard & Lindegger (2007)	Discussions
	Narrative		
	Phenomenology		
		one	
		Ackerman & Maslin-Ostrowski (2004)*	
		Phendla (2008)*	
		Jay (2009)	
		Rossiter (1999)	
	Ethnography		Grounded Theory
			and Ethnographic
	methodology	Grounded Theory Exemplars: Choose	
Research		one	Discussions
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4 June 14 /15	Casa study		Casa Study Anticla
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			Discussions
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	mixed methods	· · · · ·	
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3. June 7/8 Grounded Theory and Ethnographic Research 4. June 14/15 Case Studies and Hybrids	Narrative Phenomenology	Subreenduth (2006) Phenomenological Exemplars: Choose one Ackerman & Maslin-Ostrowski (2004)* Phendla (2008)* Jay (2009) Rossiter (1999) Creswell Chapter 4, pp. 62-73 Creswell Chapter 10, pp. 216-218 Grounded Theory Exemplars: Choose	Grounded Theo

^{*} These readings are focused on issues related to educational leadership.

5. June 21/22	,	icle critique portfolio.		
WORK DAY	Update your reflexive journal. Update your audit trail.			
Date	Dictionary Terms	Readings	Assignments	
6. June 28/29 Data Collection: Documents and Observations	Data Data collection Data management, storage, retrieval Document analysis Field Journal	Creswell Chapters 3 and 7 Lichtman (2010)	Article Critique Portfolios due	
7. July 5/6 Data Collection: Interviews and Focus Groups	Focus groups Interviewing, types of	Creswell Chapter 10 (revisit) Barbour & Schostak (2005)	Letter of Intent due	
8. July 12/13 Analysis and Representation	Generalization Triangulation Trustworthiness criteria Validity Analyzing qualitative data Computer-assisted data analysis Crisis of representation Inference Inductive analysis Interpretation Representation Warranted assertion Writing strategies	Creswell Chapters 8, 9, and 11		
9. July 19/20 WORK DAY	Finalize your proposal and pilot presentation. Finalize your reflexive journal. Finalize your audit trail.			
10. July 26/27 Final Presentations			Proposal and Pilot Presentations Reflexive Journals / Audit Trails due - add to the version that has my feedback from June 28/29 Peer Reviews (In Class)	

Critical Appraisal Skills Programme (CASP)

making sense of evidence

10 questions to help you make sense of qualitative research

This assessment tool has been developed for those unfamiliar with qualitative research and its theoretical perspectives. This tool presents a number of questions that deal very broadly with some of the principles or assumptions that characterize qualitative research. It is *not a definitive guide* and extensive further reading is recommended.

How to use this appraisal tool

Three broad issues need to be considered when appraising the report of qualitative research:

- Rigor: Has a thorough and appropriate approach been applied to key research methods in the study?
- Credibility: Are the findings well presented and meaningful?
- Relevance: How useful are the findings to you and/or your organization?

The 10 questions on the following pages are designed to help you think about these issues systematically. You should answer each question and provide a rationale for your answer. The first two questions are screening questions and can be answered quickly; the rationale for the first two questions need only be one sentence. If the answer to both is "yes", it is worth proceeding with the remaining questions. If the answer to either of these questions is "no," you should choose another article to review for your article critique portfolio. A number of italicized prompts are given after each question. These are designed to remind you why the question is important, and to support your efforts to write a rationale for each of your responses. For questions 3-10, your rationales should be at least a 'meaty' paragraph and they should reference particular content from the article (i.e., page numbers, section headings, direct quotes, etc.).

The 10 questions have been developed by the national CASP collaboration for qualitative methodologies.

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Screening Questions

1. Was there a clear statement of the aims of the research?

Consider:

- what the goal of the research was
- why it is important
- its relevance

2. Is a qualitative methodology appropriate?

Consider:

- if the research seeks to interpret or illuminate the actions and/or subjective experiences of research participants

Detailed questions

Appropriate research design

3. Was the research design appropriate to address the aims of the research?

Consider

- if the researcher has justified the research design (e.g. have they discussed how they decided which methods to use?)

Sampling

4. Was the recruitment strategy appropriate to the aims of the research?

Consider:

- if the researcher has explained how the participants were selected
- if they explained why the participants they selected were the most appropriate to provide access to the type of knowledge sought by the study
- if there are any discussions around recruitment (e.g. why some people chose not to take part)

Data collection

5. Were the data collected in a way that addressed the research issue?

Consider:

- if the setting for data collection was justified
- if it is clear how data were collected (e.g. focus group, semi-structured interview etc)
- if the researcher has justified the methods chosen
- if the researcher has made the methods explicit (e.g. for interview method, is there an indication of how interviews were conducted, did they used a topic guide?)
- if methods were modified during the study. If so, has the researcher explained how and why?
- if the form of data is clear (e.g. tape recordings, video material, notes etc)
- if the researcher has discussed saturation of data

Reflexivity (research partnership relations/recognition of researcher bias)

6. Has the relationship between researcher and participants been adequately considered?

Consider whether it is clear:

- if the researcher critically examined their own role, potential bias and influence during:
- formulation of research questions

- data collection, including sample recruitment and choice of location
- how the researcher responded to events during the study and whether they considered the implications of any changes in the research design

Ethical Issues

7. Have ethical issues been taken into consideration?

Consider:

- if there are sufficient details of how the research was explained to participants for the reader to assess whether ethical standards were maintained
- if the researcher has discussed issues raised by the study (e. g. issues around informed consent or confidentiality or how they have handled the effects of the study on the participants during and after the study)
- if approval has been sought from the ethics committee

Data Analysis

8. Was the data analysis sufficiently rigorous?

Consider:

- if there is an in-depth description of the analysis process
- if thematic analysis is used. If so, is it clear how the categories/themes were derived from the data?
- whether the researcher explains how the data presented were selected from the original sample to demonstrate the analysis process
- if sufficient data are presented to support the findings
- to what extent contradictory data are taken into account
- whether the researcher critically examined their own role, potential bias and influence during analysis and selection of data for presentation

Findings

9. Is there a clear statement of findings?

Consider:

- if the findings are explicit
- if there is adequate discussion of the evidence both for and against the researcher's arguments
- if the researcher has discussed the credibility of their findings (e.g. triangulation, respondent validation, more than one analyst.)
- if the findings are discussed in relation to the original research questions

Value of the research

10. How valuable is the research?

Consider:

- if the researcher discusses the contribution the study makes to existing knowledge or understanding (e.g. do they consider the findings in relation to current practice or policy, or relevant research-based literature?)
- if they identify new areas where research is necessary
- if the researchers have discussed whether or how the findings can be transferred to other populations or considered other ways the research may be used
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Hallmarks of High Quality Reflexive Journals

Entries in your reflexive journal should document your substantive thinking about one or more of the following questions:

- What have I learned about qualitative methodology?
- Who am I becoming as a researcher? Who do I want to be as a researcher?
- What is the nature of "my particular pair of spectacles"? How do I see the world in unique ways? How do my views, my lenses, my biases, and my assumptions shape what I can, and cannot, see in my data? How do they shape the data I collect, the analyses I conduct, the conclusions I reach, and the ways I disseminate my work?
- What sense am I making of the class readings? ... the field experiences? ... the class experiences?
- How are my readings, fieldwork, and class experiences related?
- In what ways am I building skills as a qualitative researcher? What has gone well? What mistakes have I made in my fieldwork? What will I do differently next time? Why?
- How is my sense of my class project evolving? How are my ideas for my dissertation evolving? How are my ideas for my professional program of research evolving?
- How am I working to align my research topic, research questions, research design (data collection and analysis plans), and writing for my class project? ... for my dissertation? ... for my professional program of research?

There are also five criteria that can be used to assess the degree to which reflexive practice is productive. I will assess your journals based on the degree to which your writing meets these criteria. They are:

- 1. **Specificity and Clarity:** Does the reflexive writing draw on specific language and terminology rather than broad, vague terms? Does it clearly communicate a message, epiphany, discovery, concern, or question?
- 2. Accuracy: Does the reflexive writing refer to concepts in qualitative research in ways that demonstrate accurate, or evolving, understanding? Does the reflexive writing including appropriate, if informal, citations where the thoughts, ideas, and words of others have been used? That is, this document will be most useful for you if you use at as a place to record ideas that you may cite in future work (conference presentations, journal articles, chapter 3 of a dissertation, etc.).
- 3. **Synthesis:** Does the reflexive writing provide evidence that you have drawn on more than one source of information (reading, field experience, class experience, etc.) to reveal deep thinking about qualitative methodology?
- **4. Self-Focus:** Does the reflexive writing include substantive statements about the your learning and experiences? After all, reflection is ultimately about *you*.
- **5. Future-Focus:** Does the reflective writing include specific statements about your future practice as a qualitative researcher?

[•] Davis, E. A. (2006). Characterizing productive reflection among preservice elementary teachers: Seeing what matters. *Teaching and Teacher Education*, 22(3), 281-301.

[•] Based on guidelines developed by Dr. Heather A. Davis