

The Power of Questions  
A Guide to Teacher and  
Student Research

*Instructor's Guide*

Beverly Falk and  
Megan Blumenreich

HEINEMANN  
Portsmouth, NH

**Heinemann**

A division of Reed Elsevier Inc.  
361 Hanover Street  
Portsmouth, NH 03801-3912  
www.heinemann.com

*Offices and agents throughout the world*

© 2005 by Beverly Falk and Megan Blumenreich

All rights reserved. No part of this website may be reproduced in any form or by any electronic or mechanical means, including information storage and retrieval systems, without permission in writing from the publisher, with the following exceptions: pp. 14-15, 16-17, 18, 19, 20, 22, 27, 28-29, 30, 31, 33, which may be photocopied for classroom use only.

*Editor:* Lois Bridges

*Production editor:* Sonja Chapman

*Typesetter:* Gina Poirier, Gina Poirier Design

# Introduction



The ideas in this book were developed for a course on teacher research that is the culminating experience of the graduate programs in early childhood/elementary education at the School of Education where we teach. The main purpose of the course is to provide an opportunity for the teacher learners in the programs to experience themselves as learners in the same way that we want them to provide opportunities for their preK–12 students. As we designed this course we wanted to find ways to support our teacher learners and their students to become inquirers, critical thinkers, and active learners. We wanted to provide occasions for our teacher learners to wonder about things, generate and pursue their own questions, reflect, analyze, and critique so that they, in turn, would know how to stimulate their students to ask new questions, think for themselves, and get excited about their own learning.

## *Experiencing oneself as a learner*

This course was set up to make sure that candidates graduating from our teacher education program are not just proficient in content knowledge and the “book learning” of pedagogy, but that they know through experience how to make learning come alive for themselves and for their students. We believe that good teaching and genuine learning occur when people are awakened to their interests, are intrinsically motivated and excited about finding things out, and are able to chart their own pathways to new knowledge. The best way to “teach” this, we are convinced, is to structure experiences that allow individuals to come to know what it feels like to be learners themselves and to have a series of opportunities to evaluate and reflect on these experiences. Once this has happened, these understandings can become a benchmark of future learning.

## *Teaching as research*

The implications of these ideas for teaching extend not only to the type of learning experiences teachers structure for students, but also to the process that teachers use to make decisions about what, how, and when students learn. Effective teachers know how to ask insightful questions about their students, gather evidence to help answer those questions, reflect on and analyze the data, and use the information acquired to make decisions about what, when, and how to teach next. A good teacher is not just a passive technician who dutifully follows the teacher’s guide of the mandated text to the letter, but rather is a good researcher who actively and continually assesses what students know and can do to construct curricula, or at least shape curricula that has been mandated into meaningful

and relevant experiences. To become this kind of teacher requires the same tools needed for research. In this way, learning to become a teacher researcher is an induction to the profession; an internship into inquiry that embodies the pedagogy we uphold and want to promote.

### *Valuing the wisdom of practice*

Experience with teacher research also offers teacher learners an opportunity to practice accessing the collective knowledge of our profession. Many of the burning questions and daily challenges of teaching have been experienced and dealt with by others who have, in turn, studied and written about them. By teaching our teacher education candidates and/or colleagues how to access others' research, we send a powerful message to them that no one should struggle alone with the mighty challenges of teaching. We advocate looking to the understandings accumulated by those who study teaching as well as to the wisdom of practice documented by teachers for help in figuring out problems, answering questions, charting new courses, maneuvering swift waters. This, of course, includes the understandings each teacher has accumulated him/herself and opens the possibility that s/he too can be a source of professional knowledge. Again, it is about realizing that we teachers can be active knowledge makers, not simply receivers and transmitters of the wisdom of others.

### *Nurturing new voices*

We found this to be especially important for the teacher learners with whom we work, as they often come from the same urban, diverse backgrounds as their students and frequently find that what is written about their students does not match their experiential knowledge. Sometimes this is because the perspectives of those who write the studies are (subtly or not so subtly) infused with racial and socioeconomic assumptions. When teachers who come from the same backgrounds as their students study schooling from their own tacit understandings of the issues, new perspectives can push our knowledge as a profession forward in ways that have not been accessed before.

### *Structure and Format of the Teacher Research Class*

The research experiences outlined in this book are not intended to be followed like a recipe. We ourselves continually change, revise, and (hopefully) improve the activities we do and the order we do them based on feedback from our students that we continually solicit. Just as a good lesson plan for the preK–12 classroom should be looked at only as a draft, subject to the input of the students and shaped by their reactions to the material, we offer this book and this guide to the book in the same spirit.

A course on research is the culminating experience in our teacher education programs. The experiences outlined in this book, however, can also be used for a professional development course for teachers at all stages of their career. (Our classes often have teachers who have had a variety of different kinds of experiences and who have been teaching for varying amounts of time.)

We present the course as a year-long experience. This extended timeframe enables our teacher learners to have plenty of time to “mess about” (Hawkins, 1979) with their ideas, to deeply explore them, and to incorporate their learning into their thinking. The first semester is intended to provide resources and a support network for teacher researchers to conceptualize and plan their studies. The second semester allows them to draw on their

knowledge of qualitative research explored in the first semester and to carry out their own research study. Allotting a full year to this learning gives us the opportunity to incorporate the nuts and bolts of research skills and technology skills<sup>1</sup> into the work that we do. Most importantly, however, the year-long timeframe allows us to emphasize the critical importance of revision in the production of quality work. We provide multiple opportunities for students to submit drafts of their work, for us to review and critique them, and for students to revise and re-revise. The second semester allows them to revise yet again and try out the skills they have learned in the first semester in a fresh way. Allotting this extended period of time for their work emphasizes to our teacher learners that learning takes time, that they need to build stamina to make it through the long haul, and that when they persevere, they can accomplish goals about which they previously thought they could only dream.

### *Principles of Learning for the Class*

We guide our teaching by some principles we believe are applicable to learners of all ages. These include:

#### *Creating a community of learners*

To take the risks necessary for real learning to occur, students need to feel safe and supported. To ensure that our students are able to take these risks, we try to create an atmosphere of safety and trust in the class. This is reflected in the details of how the class is conducted—from the room arrangement to the activities presented. We like to arrange seating in a circle rather than lecture style so that class participants can share and figure things out together, not just be talked at by the instructor. We also make sure that time is built into the class for people to get to know each other. We share information about ourselves as well—our own work, questions, dilemmas, story of development—so that teacher learners can make connections between their pathways to learning and ours.

Learners need to feel that they have colleagues to whom they can turn for support. We address these needs by offering lots of opportunities for social interaction and collaboration. We divide class participants into groups based on the common themes of their questions. Regularly these groups meet to update each other on the progress of their research, to share resources, to give feedback to each other, and to probe each other's thinking. Usually we give the groups focusing questions or peer-editing guides that can be used to steer their discussions. These are first modeled with one or two students in front of the entire class. Additionally, we create an on-line community. Everyone has everyone else's email addresses and access to Blackboard, an on-line format for university classes. Through it, we are able to have threaded discussions on aspects of the research experience, which enable the teacher learners to informally share information, give each other tips, and/or support.

We also try to provide regular opportunities throughout the course for reflection on how the course is going, usually in written form or in verbal "go-rounds." At the end of the course, students orally and visually make presentations to each other and, sometimes, to others beyond the class. We make these events celebrations of our accomplishments by including food and by publicly acknowledging our hard work.

<sup>1</sup>In this course we often encourage our teacher learners to experiment with technology such as learning how to do web searches, how to use scanners, digital cameras and video cameras as data collection tools, learning how to make I-Movies and put visuals in the bodies of text documents.

### *Honoring the different ways that people learn*

Interest is a powerful motivator to learning. No better guarantee can be made that students will sustain the energy and the perseverance to complete their work than by ensuring that everyone is pursuing something that is of interest and value to them. This is often a challenge to accomplish, as most of the schooling of the teacher learners we work with has been focused on learning things of importance to others rather than on helping them identify their own important work. So, we allot plenty of time to helping our teacher learners identify what is important to them, what they really care about and are interested in. We try to get to know our learners well and to develop experiences for them that will help them awaken and uncover the questions that they have within. We want our students to see that their ideas matter and can make a difference. We want them to be engaged in *their own work* and for them to take charge of their own learning.

### *Providing supports*

Our students tend to begin this course anxious, with pre-conceived, negative ideas of the difficulties that research will entail. To help them become confident and autonomous, we build many supports into our teaching so that they leave the research experience with clear ideas about how to reach their self-chosen goals. We scaffold their learning by offering guidance every step of the way. We do this in several ways:

- **Providing time:** To figure things out, to be confused, to work through problems. Most genuine learning does not come easily and requires extended periods of time to practice skills, develop understandings, and gain the confidence needed to make assertions with authority.

- **Being clear about expectations:** We make expectations and requirements explicit through assignments and rubrics that are provided for each assignment at the beginning of the course. We also make available examples of what accomplished work from past students looks like. By doing this we make it possible for everyone to have access to images of quality work to guide their own. Doing this levels the “playing field” so that, no matter what students’ past experiences or backgrounds have been, they all know what are the characteristics of good work that they need to include in their own.

- **Allotting class time to the discussion of reading assignments:** We make sure to go over assigned readings in class, in either large groups, small groups, or pairs. We have learned not to assume that readings, even if read, are understood or that the implications of the readings have been drawn. Explicit teaching—in the form of asking questions, providing examples, drawing analogies—is essential for deep learning to occur.

- **Breaking up complicated tasks into smaller pieces:** We break down complicated research tasks, such as writing the research design and literature review, into mini-assignments so that we can provide guidance each step of the way. Each skill or new concept is discussed and tried out, with numerous opportunities offered to learners for feedback and revision.

- **Offering lots of opportunities for students to get feedback on their work and to revise it:** From peer support groups, conference times with their instructors, and, perhaps most importantly, from written feedback on numerous drafts, learners get input on how to improve and are encouraged to continually revise their work. Evaluation of learners’ work is done only after they have handed in drafts, received

feedback (carefully worded to point out strengths and areas in need of improvement in educative ways), and revised their work. Sometimes this revision cycle goes back and forth several times. The more it is done, the better the final product. We try to develop in our learners the habit of revision so that it becomes one they will carry with them for the rest of their professional lives. We want them to instill this in their preK–12 students as well. We want them to understand that producing quality work requires building stamina, in much the same way as is required for working toward excellence in a sport.

### ***Week-by-week Guide***

This week-by-week guide is offered as a suggested framework for how to use *The Power of Questions* over the course of a year. As mentioned above, we ourselves vary the way we present ideas, the activities we use in our classes, and the order and time frame of our courses. Please take this guide in the same spirit and remember to use your students—their understandings, needs, interests, and ideas—as the ultimate guide for your teaching.

Because this guide is developed for a year-long course, we divide it into two parts (designed around two semesters). Should your school structure not allot this amount of time, the course ideas and activities can easily be adapted to other time frames. Please note that the sessions are organized so that, in each part of the course, different revisions of the same assignment are due. Although doing this creates more work for the instructor, it offers class participants multiple opportunities to get feedback on their work. We have found, in our experience teaching this course, that our students often give us even more drafts than we request in our course outlines. Once they really understand the power of revision to improve their work, they “get hooked” and take full advantage of our offers to help them do their very best.

# Part I



*D*uring Part I (the first semester), we introduce research, present a rationale for engaging in it, and provide information about how to conduct a literature review and how to create a research design. At the end of Part I, we expect teacher learners to produce a Research Design for their own inquiry and a Limited Literature Review related to their question.

## *Session 1: Introduction*

Take time to introduce yourselves to each other and to establish the “feel” of a learning community. There are a lot of different ways to do this: Whole group go-arounds or pair-share introductions followed by each partner introducing the other to the group. Each individual’s introduction should include information that will help others understand him/her. We usually ask people to share their family background, work experience, and what they like best about being a teacher or why they want to be a teacher. Another good community builder is the exercise listed at the end of Chapter 1: “Reflecting on a Powerful Learning Experience.”

Offering students an overview of the course is also helpful. Knowing what to expect helps lessen anxiety. We suggest taking time to review the syllabus and the course assignments. (After teaching the class for the first time, you can invite former teacher learners to visit your class and share their experiences with teacher research.)

And finally, we recommend laying the foundation for the research work that you will do together by beginning a discussion of the relationship between teaching and research. Chapter 1 offers some ideas about the role of questions in our lives as students and teachers, about how research can inform and support our instruction, about the growing movement of teacher research and its roots in the changing landscape of cognitive science. For the coming week, assign a teacher research article for the class to read that you can analyze and discuss together as a group. (See recommendations in Appendix 1.) We also suggest that you assign participants to keep a journal of their wonderings/queries/questions that arise during the next few weeks in the course of their professional lives.

### *Tasks for teacher learners for the coming week:*

- Read Chapter 1 and 2
- Read teacher research article(s)
- Keep a journal of wonderings/queries/questions



### ***Session 2: A Look at Different Types of Research***

We believe that it is important for teachers involved in teacher research to have a good understanding of the different types of research and how teacher research fits into the continuum of research approaches. Use this session as an opportunity to discuss the information and ideas presented in Chapters 1 and 2. You can begin by asking teacher learners to reflect on what assumptions they had about research prior to reading the chapters in *The Power of Questions* and the teacher research article that they read for this session. In addition, you may want to discuss Figure 2–1, which shows the qualities of different research approaches. Analyze the assigned teacher research article for what type of research it represents and ask the teacher learners to identify the author’s research question.

*Tasks for teacher learners for the coming week:*

- Read Chapter 3
- Read teacher research article(s)
- Continue keeping journal wonderings/queries/questions

### ***Session 3: Becoming a Teacher Researcher—Finding Your Question***

Finding a question that is really meaningful to the researcher can take considerable time. Don’t ask your teacher learners to commit to a question too soon if you want the research experience to be truly transformative for them. Let them mull over the issues that puzzle or intrigue them and become more acquainted with qualitative research. While they do this, offer them examples of the kinds of research that others like them have conducted. You can ask them to reread the journal they have been keeping and highlight or underline the issues or ideas that seem provocative. In small groups, discuss the possible research questions that teacher learners are considering. Continue to analyze the teacher research articles you are reading. Here are some ideas of the types of questions to ask:

- Identify the research question(s) in the article(s) read.
- Encourage teacher learners to consider how the article is or is not an example of systematic inquiry versus a story of something that happened in a classroom.
- Ask for the context of the study and what else the teacher learners might like to know about the context.
- Have the teacher learners describe the author’s writing style and explain what they like or do not like about it.
- Ask for the evidence used by the author to support his or her findings.

*Tasks for teacher learners for the coming week:*

- Read a research article
- Continue journal
- Develop ideas for research into research questions

### ***Session 4: Refining Your Question and Developing Sub-Questions***

In class, go over how to frame questions and develop sub-questions, as presented in Chapter 3. Review the excerpts of teacher researchers' works in Chapter 3 as well as additional teacher research articles that have been assigned. For each, identify the question, sub-questions, background/context of the researcher, and the researcher's general plan of study. These should be noted as references for teacher learners to use in developing their own questions and sub-questions.

There are numerous exercises at the end of Chapter 3 that can serve as additional class activities or homework assignments. For instance, you can guide small groups discussions on their developing research questions by providing questions from Chapter 3, Exercise 3.

Throughout the discussion of questions and sub-questions, ties can be made to how to replicate the process class participants are undergoing with their own preK–12 students. The exercises at the end of the chapter can also be used with children. A special guide sheet for children is provided.

#### *Tasks for teacher learners for the coming week:*

Read Chapter 4

Draft research question and sub-questions and explanation of the context/background that leads you to pursue this inquiry

### ***Session 5: Finding What is Known About Your Question—References***

Once teacher learners have decided on their question and have a general plan for what they want to do, before moving forward with the specifics about the design of their studies, we have found that it is helpful for them to read some of the literature related to their question. An orientation to conducting a library and Internet search is a useful way to begin. Most libraries provide this service from the reference librarian. Make an appointment for a visit and let the reference librarian update you on the latest developments.

#### *Tasks for teacher learners for the coming week:*

Begin working on finding articles related to your research question

Read an example of a literature review (There is one in Appendix 4 and/or find another published example)

### ***Session 6: Finding What is Known About Your Question—Understanding and Analyzing Others' Research***

Devote some class time to a discussion of how to get information, gain understanding, analyze and synthesize the ideas in research articles (highlighting, notes-on-notes, organizing information). While this may seem rudimentary, you may be surprised at how many of your class participants (even those who have strong academic backgrounds) have never been instructed in the nuts and bolts of reading and getting information from non-fiction texts. Going through the details themselves is a great way to help teacher learners think about how to help their preK–12 students learn these skills. The exercises at the end of the chapter can be used as class activities or discussed for how to use them in classes with children. The teacher learners we have worked with particularly appreciate Exercises 5a and 5b at the end of Chapter 4, which provide guidance for sorting through and charting the

big ideas in the articles. We do not recommend jumping right away to producing a full literature review, although introducing the literature review at this time is perfectly appropriate. We suggest instead having teacher learners first gather a reference list and read a few of the texts from this list to help them shape their ideas about their own studies. Remember to instruct about APA format, the reference format generally used in the field of education (see Appendix 3 at the end of the book). You will be amazed to find how few people actually know how to do it!

This is a great time also to divide the class into small groups based on the themes of their research questions. Small group members can share resources with each other and serve as an ongoing support for each other throughout the entire research experience.

*Tasks for teacher learners for the coming week:*

Work on draft reference list

### ***Session 7: Finding What is Known About Your Question continued***

There are probably many questions remaining from last week's discussion. Devoting more time to this area of work, especially how to help children read for meaning and process what they read, is a worthy investment. Try having everyone read the same article and discuss it, followed by a discussion of the features of a good literature review. (Some might confuse a literature review with an annotated bibliography.) Use the guiding questions in Exercise 4 at the end of Chapter 4.

*Tasks for teacher learners for the coming week:*

Read Chapter 5

Work on draft reference list due next week

### ***Session 8: Developing a Research Design—Overview***

All teachers are familiar with multi-tasking. We suggest that you have your teacher learners multi-task too so as to maximize the time that they can have to absorb the ideas of all the different aspects of the research process. So while they are looking for references and learning about how to synthesize what they have learned from their readings into a literature review, have your teacher learners begin learning also about how to develop a research design. Review the information presented in Chapter 5. You may want to point out the consent form and encourage participants to begin working on this form and share the work in progress with their school administrators. In class, refer back to some of the teacher research articles read earlier and look for how the different components of a research design (participants, context, data collection procedures, and analysis techniques) are addressed in the studies of the teacher researchers who wrote the articles.

*Tasks for teacher learners for the coming week:*

Read Chapter 6

Begin reading articles from your reference list

### *Session 9: Developing a Research Design—Data Collection Tools*

Knowledge and experience with the many different kinds of data collection methods are needed to create a research design. We suggest using class time for some small group activities that offer first-hand experience with different data collection methods. A variety of suggested activities are presented in the exercises at the end of Chapter 6. You can engage the whole class in experiences with all types of data collection methods or you can assign each small group to work on a different method and then share their experiences with the group as a whole. For instance, you can ask each participant to write some potential interview questions, then, using Exercise 3, they can share and peer edit the interview questions in their groups.

*Tasks for teacher learners for the coming week:*

Read Chapter 7

Bring in samples of student work

Heads up for Session 11: Draft of methodology section of Research Design

Heads up for Session 12: Choose 3–5 articles from your reference list and begin work on the Limited Literature Review

### *Session 10: Developing a Research Design—Data Analysis*

While the details of how to conduct data analysis can be presented at a later date, it is useful to introduce course participants now to what is involved in the overall process of data analysis so that they have a sense of how the data analysis process will proceed. This knowledge will help them to plan and to reflect that planning in their research design. Chapter 7 discusses data analysis and offers many exercises to guide researchers through the data analysis process. For instance, you may want to introduce data analysis by asking teacher learners to look at some of their own students' work in groups. Use Figure 7–1 for questions to guide the groups in analyzing the work. At the end of this exercise ask the teacher learners what they learned from having colleagues look at their students' work with them. Do they have opportunities to do this in their schools? What might this experience tell them about how they want to analyze data in their own studies?

### *Sessions 11–13: Peer Support for Research Design Development and Literature Review*

More time is always needed than teachers plan for learners to process new understandings. Use these sessions as opportunities to check in with class participants for clarification and discussion of questions and concerns. Make sure that during these sessions you offer guidance for how to create interview and survey questions (Chapter 6), how to write an informed consent letter (Chapter 6) and how to write a review of literature that is a synthesis rather than consecutive article/book reports (Chapter 4), and how to put together all of the pieces of the Research Design (Chapter 5). Break up into the peer support groups that were created based on research themes and encourage these small groups to share resources and help each other with their individual issues.

*Assignment due:*

Session 11: Draft of methodology section of Research Design

Session 12: Draft of Limited Literature Review

Session 13: Draft of full Research Design

***Session 14: Presentations***

We have found that the variety of topics teacher researchers pursue through their studies is amazing! Make time for class participants to share information they are learning about the topics related to their questions. In this way, the learning of individuals can become the learning of the group. A form is provided below to help presenters share their learnings with the class in an efficient way.

*Assignment due:*

Final draft of Limited Literature Review

***Session 15: Review and Evaluation of the Course and the Work***

Before completing Part I of the research experience, give class participants an opportunity to reflect on the experience they have had thus far and share their thinking about it. Providing time in class for participants to fill out an anonymous reflection sheet will ensure that you will receive candid responses. A class go-around for those who want to reflect publicly helps to sustain the sense of class community. Doing both offers you, the instructor, important feedback on how to shape the class in the future to better respond to your learners' needs.

*Assignment due:*

Final draft of Research Design

# Assignments and Rubrics for Part I

## *Assignment #1: Research Design (Guide and Rubric)*

Your research design draft is due on \_\_\_\_\_. The final revision is due on\_\_\_\_\_.

Please number pages at the bottom of each page. The completed research design should include the components below. Please make sure that writing mechanics (spelling, punctuation, paragraphs, quotation marks, etc.) and the conventions of English (sentence structure and grammar) are used correctly.

### **1. Statement and explanation of your research question**

- a. What is the question or issue on which your study is based? What are the sub-questions that break your big question into more manageable ones? For example: “What kinds of learning are supported by young children’s play?” (This is the question.)  
Subquestions are: “How does play influence academic learning? How does it affect social learning? What other impact does play have on young children’s learning?”
- b. What are you going to examine in your study? What project/activity are you planning to do that you are going to document?
- c. Explain the context and background for your study that led you to pursue this study? What perspective, background, assumptions, biases do you bring to this study?

### **2. Methodology**

#### 2.1 Relevant data

- a. Whom are you going to study (the sample)? How did you choose this sample? Explain the rationale for your choice.
- b. What sources of data do you plan to collect for your study? These can include the following: Observations, interviews, samples of student work, pictures, videos, audiotapes, journals, surveys. Include a grid that demonstrates how each source of data provides information that will answer your research question.
- b. Describe how each source of data provides information that will answer your research question.

#### 2.2 Data collection method

- a. Who will collect the data?
- b. In what setting will you collect each type of data?
- c. When and where (specifically—i.e., during the language arts block at \_\_\_\_ time of the day or at different classroom centers) will you collect each type of data?
- d. For how long will the data collection period for your study last?

2.3 Include the permission request letter and consent form, interview questions, and/or survey(s) that you plan to use in your study. If you are doing interviews or surveys, you should formulate the questions and include a copy with your paper. The same questions should be asked to all of the people who are interviewed or surveyed. The permission letter needs to include: who you are, why and for whom you are doing your study, what you are asking of the families (i.e., to take photos, to interview or survey them, to collect student work, etc.), and assurance of confidentiality (that you will not reveal their identities).

#### 2.4. Data analysis plan

What is your plan for data analysis?

What method will you use to analyze the data?

Around what themes or questions will you organize the data analysis?

At what point(s) in your data collection will you analyze?

### 3. Reference list

Locate some studies completed by other people about your question or issue. List at least 10 references (books, articles, online sources) that you will use to ground your study in the work of others. You may not find studies that are about exactly the same issue or question as yours, but you instead may find studies that give you a background on the issue that you are pursuing. References should be cited in APA format.

### 4. Calendar

Make a timeline for conducting your study next semester. It should include time allotted for:

data collection

data analysis

review of literature (the semester break is a good time to do this)

writing a first draft of your report

revising for your final draft

You do not need to list the dates but you should give a sense of when and in what order you will begin and end the different components of your project.

## Research Design Reubric (75 points)

Your research design will be assessed according to the following criteria:

not evident = 0    partially evident = half amount    fully evident = full amount

### 1. Statement and explanation of your research question

- a. Question is framed clearly, is in an inquiry mode, has relevant subquestions (10 points) \_\_\_\_\_
- b. What you are going to examine in your study—the project/activity you are planning to do is clearly explained (5 points) \_\_\_\_\_
- c. Context and background for the study are explained (5 points) \_\_\_\_\_

### 2. Methodology

#### 2.1 Relevant data

- a. Study sample is identified and a rationale is provided for why it is chosen (5 points) \_\_\_\_\_
- b. Three sources of data are described and a grid is made demonstrating how each data source addresses each question (5 points) \_\_\_\_\_
- c. A clear explanation is provided for how each question is connected to the research question (5 points) \_\_\_\_\_

#### 2.2 Data collection method is fully explained (5 points) \_\_\_\_\_

- a. Who will collect the data
- b. In what setting will the data be collected
- c. When and where each type of data will be collected
- d. For how long

2.3 Permission letter and consent form, interview questions, and/or survey(s) that you plan to use in your study are included. For interview questions, and/or surveys, each question should be mapped to a research sub-question(s). The permission letter needs to include: who you are, why and for whom you are doing your study, what you are asking of the families—permission to take photos, to interview or survey them, to collect student work, etc., and assurance of confidentiality (that you will not reveal their identities) (10 points) \_\_\_\_\_

#### 2.4. Data analysis (5 points) \_\_\_\_\_

Plan for data analysis is fully described, including the approach to analysis (how you will go about doing the analysis) and at what points in the data collection the data will be analyzed



**3. Reference list (15 points)**

---

The list contains 10–15 books or articles

Different kinds of sources are used (journal articles, Internet sources, books)

References choices are well matched to the topic, reflect important ideas and work in the field.

APA form is correctly used

**4. Calendar (5 points)**

---

Timeline for conducting the study includes the amount of time allotted (in consecutive order) for:

data collection

data analysis

review of literature

writing a first draft of the report

revising for the final draft

**Total**

---

## Assignment #2: Limited Literature Review and Rubric

Your review of research can address some or all of the following purposes:

1. To locate your study in a theoretical framework; i.e., to place your questions and ideas in the context of a particular perspective or approach. It could do this by explaining different perspectives about or approaches to your topic or related topics.
2. To learn more about the field/question you have chosen to study: investigate what others have to say about your question or a related question.
3. To help explain your emerging theory by looking at other theories in related fields.

*Steps to creating your literature review:*

Reading and Putting Together your Ideas

1. Read at least three articles or books.
2. Highlight or underline or put stickies on or take notes on important information and ideas.
3. Review what you marked as important and try to organize the information under several big ideas or themes (writing the theme or big idea in the margin can be helpful).
4. Make a chart or outline of the big ideas, noting the sections in the text that fit under each big idea or theme.

Writing

5. Write an introduction that describes the big ideas or themes you have discovered in the readings
6. Devote a section for each big idea or theme, explaining and illustrating each idea with examples and quotes (if desired) from the texts you have read. Remember in these sections that you are explaining an idea and that you are *synthesizing* what you have read. (A synthesis pulls together ideas across many readings, referencing the views of the different authors read to illustrate and elaborate on ideas. It is not a report that serially discusses one idea or author's work after another.)
7. Write a conclusion that summarizes the big ideas, addressing any differences and/or similarities in perspective of the researchers/authors you have read
  - a. Discuss your own views of the issues: What have *you* learned from and what do *you* think about what these other researchers/authors have said? What is your evaluation, interpretation, or conclusion (i.e., with whom do you agree/disagree; do you think that they have misinterpreted, ignored, under-emphasized or overemphasized particular aspects of the question(s)?)
  - b. Discuss what questions you are left with after reading other peoples' work. How does this all relate to your study?

## Limited Literature Review Rubric

### Introduction (3 points) \_\_\_\_\_

A context/background is described for the literature that is being reviewed.

The big ideas or themes discovered in the readings are introduced.

### Big Ideas (7 points) \_\_\_\_\_

Each big idea or theme is written about in a section with a heading.

In each section the big idea is explained and illustrated with examples and quotes (if desired) from the different readings.

Ideas from the writings of different authors referenced in appropriate format in the text.

Different authors' writings are synthesized and used to illustrate different aspects of the theme (not discussed as separate reports).

### Conclusion (3 points) \_\_\_\_\_

The big ideas are summarized, addressing any differences and/or similarities in perspective of the researchers/authors read. Your own views of the issues are discussed, explaining what *you* have learned from and what *you* think about what these other researchers/authors have said. Your evaluation, interpretation, or conclusion is presented (i.e., with whom do you agree/disagree; do you think that they have misinterpreted, ignored, underemphasized or overemphasized particular aspects of the question(s)?).

How the big ideas in your review are related to your study is explained.

Any questions you are left with after reading other peoples' work are presented.

### Writing (2 points) \_\_\_\_\_

Ideas are communicated clearly and presented in a well-organized manner.

Mechanics and conventions of print (spelling, punctuation, grammar, etc.) are correct.

In text references are used correctly.

### **Total** \_\_\_\_\_

**Assignment #3: Class Presentation of "Big Ideas" From the Literature Review (5 points)**

Study Title: \_\_\_\_\_

Study Author: \_\_\_\_\_

Date: \_\_\_\_\_

Research question(s)
Big Idea #1 from the literature
Big Idea #2 from the literature
Big Idea #3 from the literature
Your thoughts/comments

*Criteria for evaluation:*

Oral presentation is clear, well explained with sufficient detail and examples so that others understand (3 points) \_\_\_\_\_

Outline is clear and presented neatly and written using correct grammar, spelling, punctuation (2 points) \_\_\_\_\_

**Total** \_\_\_\_\_

*Final Grade for Part I*

<b>Assignment</b>	<b>Grades</b>
Reference list	15 points
Research design	60 points
Limited Literature Review	15 points
Class presentation	5 points
Class participation and personal contributions (criteria to be determined by the class)	5 points

A+ = 98 – 100 points

A = 94 – 97

A- = 90 – 93

B+ = 87 – 89

B = 83 – 86

B- = 80 – 82

C+ = 77 – 79

C = 73 – 76

C- = 70 – 72

Unacceptable = below 70



## Part II



During Part II (the second semester), teacher learners complete their literature review and conduct, write-up, and present their findings. Because during this part of the course, participants are conducting their own research and putting together their findings, their need for support and instruction are highly individualized. We thus recommend holding individual conferences with each teacher researcher during this period to make sure that the questions and concerns unique to them are addressed. In addition to having conference opportunities, we have generally found that the teacher learners with whom we work also want to continue our full group sessions to get support and maintain a sense of community. During these times we suggest offering ample opportunities for peer support groups to meet.

At the end of Part II, we expect teacher learners to produce a Final Report that includes all the components of the research process that they have worked on throughout the year. Although we do not make formal assignments about engaging in research with children, we also hope that they will try out some of the ideas presented in *The Power of Questions* with their preK–12 students. Throughout the sessions we make connections to doing research with children and invite our teacher learners to share the research activities they are doing with the students in their classrooms.

### *Session 1: Orientation to the Work Ahead*

Before launching into the work of the second part of the research course, take some time to check in with each other about the progress each person has made with her/his work. Review the tasks for the period ahead, the format you anticipate the class to take, and the schedule of assignments. Entertain issues/questions/concerns.

Begin a review of data collection issues. Chapter 6 has many exercises and guides to help teacher learners with data collection.

### *Tasks for teacher learners for the coming week:*

Review Chapter 6

Bring in a sample of data collected thus far

Heads up for the full Literature Review draft that will be due in a few weeks

### *Session 2: Issues in Data Collection*

By now, everyone should have begun the data collection process. Before they get too far into it, hold a discussion about the characteristics of good data. Devote some class time to reviewing the examples and exercises in Chapter 6. For instance, perhaps your teacher learners are finding that the interview guides they created earlier are not as fruitful as they had intended them to be in producing useful data. Break up into peer support groups to have peer reviews of data collected thus far, and work on revising data collection instruments.

Before proceeding any further with the research plan that was developed in Part I, ask course participants to revise it one more time based on your feedback at the end of Part I of the class. There may have been components of the plan that needed to be changed and you want to make sure that those changes have been made.

*Task for teacher learners for the coming week:*

Revise the Research Design, if needed

### *Session 3: Technology Supports*

Part of your teacher learners' data collection process and their putting together of study findings may involve technology use. Schedule a visit to your computer lab to make sure that everyone in your group is familiar with the technology possibilities—how to use digital photography and video for data collection. A fun activity is to have the class break up into groups, each group using a still digital or digital video camera, and take footage around your school. End with a group share-out of what each group did.

*Tasks for teacher learners for the coming week:*

Complete the full Literature Review

Read Chapter 7

### *Session 4: Analyzing Data*

Now that the literature review is handed in, you can focus attention on the skills your teacher learners will soon need to conduct data analysis. We have found that it is worthwhile to spend class time going through how to code, sort, and analyze data. Ideas and activities for how to do this are presented in Chapter 7.

*Tasks for teacher learners for the coming week:*

Bring in data to analyze and an example of a data analysis memo

### *Session 5: Issues in Analyzing Data*

Review issues of data analysis that were discussed in the previous course session. Break into peer support groups and have members review the preliminary analyses of each other's data. Asking the participants to bring in a data analysis memo reminds them that they should be analyzing the data throughout the data collection period. Ask students to volunteer to share their memos with the class and discuss together what might make a useful memo for future data analysis.



*Tasks for teacher learners for the coming weeks:*

- Continue data collection and analysis
- Work on revisions of full Literature Review

***Session 6: Technology Supports continued***

Another session in the computer lab can focus on how to use technology to report study findings. Make sure everyone knows how to scan documents and insert photos/work samples into the text of their reports. Some teacher researchers may also want to turn their video documentation into I-Movies or make websites. Instructions on these fun and easy-to-use formats can be included during this time as well.

***Session 7: Individual Conferences***

Take a break from convening the full class to check in with individuals about the progress of their work. In lieu of holding a class, we occasionally use course time to schedule 15–20 minute conferences for each course participant. Students sign up for a time slot in advance so that they do not have to come for the entire course session.

*Tasks for teacher learners for the coming week:*

- Read Chapter 8
- Revise Literature Review

***Session 8: How to Write Up Your Findings***

As the data collection period draws to an end and data analysis is underway, introduce the many different ways that teacher researchers can present their findings. Use the information presented in Chapter 8, referring to its examples and exercises. In our own classes, we also make available examples of studies conducted by other teacher researchers with whom we have worked. The more images of different kinds of quality work that we can offer to new teacher researchers, the better sense they have of the possibilities for what they might produce.

*Tasks for teacher learners for the coming week:*

- As teacher learners get involved in writing findings, you may want to suggest reading Anne Lamont's *Bird by Bird* or other books about writing (see Appendix 5)

***Sessions 9–12: Issues in Writing about Findings/Conclusions and the Implications of Studies***

During the next few weeks, use your judgment about what your class needs. Some groups need more individual conferencing. Others prefer to meet as full groups, and still others want and need the support of their small peer groups. Whatever format you choose for your meetings, make sure to provide time for everyone to go over their work-in-progress and to air issues/concerns/questions that are arising. Review how the final presentation of their work should look. Continue to make available exemplars of others' work. Take time to discuss the process that the teacher learners are going through and how they are translating it or thinking of translating it to their work with preK–12 students.

*Assignment due:*

Session 9: Data analysis chart

Session 12: Draft Findings/Conclusions

Read Chapters 9 and 10

***Sessions 13–14: Presentations of Research***

We have no doubt that your teacher researchers will have produced amazing work! We are sure that you will want to find a way to share it with each other, your school and/or local professional community. Teacher researchers can make individual presentations to the class as a whole or to each other in small groups. A poster session can be set up (this requires additional work on posters, Powerpoint, or other visuals that succinctly present study highlights) so that everyone's work can be shared publicly. Another option is to hold a research symposium that shares selected studies with your school and/or community. Make sure to create a professional atmosphere for these events and, at the same time, to make them festive.

*Assignment due:*

Session 13: Final revision of all parts of the final report, minus the Findings/Conclusions

***Session 15: Sum-up and Evaluation of the Research Experience***

Your journey together as a research community has come to an end. Solicit anonymous written feedback from the teacher researchers as well as provide an opportunity for a public class sharing of their reflections on the research and class experience. Hold an end-of-course celebration! Congratulate yourselves on the work well done. Make sure that you exchange contact information so that you all can stay in touch in the future.

*Assignment due:*

The full, finished product!

## Assignments and Rubrics for Part II

### *Assignment #1: Full Literature Review Scoring Rubric (40 points)*

Your grade for the literature review will be based on the degree to which your review exhibits the following qualities:

No evidence = 0 points

Adequate evidence = 2/3 points

Limited evidence = 1/3 points

Full evidence = full points

#### *Introduction (6 points)*

A context/background is described for the literature that is being reviewed.

The big ideas or themes discovered in the readings are introduced.

#### *Big Ideas (12 points)*

Each big idea or theme is written about in a section with a heading.

In each section the big idea is explained and illustrated with examples and quotes (if desired) from the different readings.

Ideas from the writings of different authors are referenced in appropriate format in the text.

Different authors' writings are synthesized and used to illustrate different aspects of the theme (not discussed as separate reports).

#### *Conclusions/Implications (9 points)*

The big ideas are summarized, addressing any differences and/or similarities in perspective of the researchers/authors read. Your own views of the issues are discussed, explaining what you have learned from and what you think about what these other researchers/authors have said. Your evaluation, interpretation, or conclusion is presented (i.e., with whom do you agree/disagree; do you think that they have misinterpreted, ignored, underemphasized or overemphasized particular aspects of the question(s)?).

How the big ideas in your review related to your study is explained.

Any questions you are left with after reading other peoples' work are presented.

#### *References (10 points)*

10–15 references are included.

Different kinds of sources are used (journal articles, Internet sources, books).

References choices are well matched to the topic, reflect important ideas and work in the field.

APA format is used correctly.

#### *Writing (3 points)*

Ideas are communicated clearly and presented in a well-organized manner.

Mechanics and conventions of print (spelling, punctuation, grammar, etc.) are correct.

In text references are used correctly.

#### **Total**

## Assignment #2: Final Research Report

The absolutely final draft of your research paper is due on \_\_\_\_\_.  
It will be graded according to the criteria on the attached sheet.

In order to make sure you will have it completed, you should stop collecting data by Session 8.

The final paper *must* include the following components:

### 1. Statement and explanation of your research question

- a. What is the question or issue on which your study is based? What are the subquestions that break your big question into more manageable ones?
- b. What did you examine in your study? What project/activity did you document?
- c. Explain the context and background for your study. What is the perspective, background, assumptions, biases that led you to pursue this study?

### 2. Review of literature

In this section, explain what other people who have studied your issue have had to say about it. The idea is to ground your study in the work of others. You may not find studies that are about exactly the same issue or question as yours, but there may be studies that have given you a background on the issue that you have pursued. 10–15 references (less if they are books) are required. *Your review should not be a listing of each reference and what it is about. Your review should be a synthesis and discussion of the ideas in the various readings.* (See earlier hand-out on literature review.) References should be cited in the text in the correct form.

### 3. Reference list

This list should include the readings you used for your review of the research. A guide to the appropriate format is in Appendix 3.

10–15 references should be included.

Different kinds of sources should be used (journal articles, Internet sources, books).

References choices should be well matched to the topic, reflect important ideas and work in the field.

### 4. Methodology

#### 4.1 Data Sources

- a. Describe whom you studied (the sample), how you chose the sample, and provide a rationale for why you chose this sample.
- b. Describe three sources of data that you collected for your study. These can include the following: Observations, interviews, samples of student work, pictures, videos, audiotapes, journals, surveys. Include a grid that maps the data to your questions.
- c. Describe how each source of data provided information that answered your research question.
- e. Include copies of your interviews or surveys with your paper. The same questions should be asked to all of the people who are interviewed or surveyed.

#### 4.2 Data collection method

Describe the method you used to collect your research data:

- a. Who collected the data?
- b. In what setting did you collect each type of data?
- c. When and where (specifically – i.e., during the language arts block at \_\_\_\_\_ time of the day or at different classroom centers) will you collect each type of data?
- d. For how long did the data collection for this study take place?

#### 4.3 Informed consent

Include the permission letter(s)/consent form you used.

#### 4.4 Data analysis

What was your plan for data analysis?

What method did you use to analyze the data?

Around what themes or questions did you organize the data analysis?

At what point(s) in your data collection did you analyze?

### 5. Findings/Conclusions/Implications

This section tells the story of the answer to your question. It can be in a report form, a story form, or any creative way you decide. The idea is to pull out the main points, themes, understandings, or issues that have come from your study and to discuss them using illustrations from the data you have collected. (For example, you may have found that there are five kinds of learnings that young children get through play. Present each one as a heading, under which you give examples from your data collection. Here is where you might want to include samples of children's work or photos of children in the classroom, etc.)

In this final section you also tell what you learned from this study:

- a. Summarize your central findings and tell the reader what you learned from this research.
- b. How is what you have learned the same or different from the ideas you read about in your literature review?
- c. What is the significance of all of this? What are the implications for you as a teacher and for other teachers and educators?

### 6. Appendix

In this section you may include charts, graphs, or figures (work samples, art work, pictures, etc.) that you use to illustrate your findings. These should be labeled AND explained. Do NOT put in random figures without connecting them to the points you are making in your report. (You may choose to place these items in the body of your report.)

A second section of the appendix should include your original notes and other data collection materials.

## Research Report Scoring Rubric (50 points)

Your grade for this course will be based on the quality of your final research paper. Below is a description of what constitutes full achievement of the criteria for an accomplished paper:

No evidence = 0 points

Adequate evidence = 3/4 points

Limited evidence = 1/4 points

Full evidence = full points

### *Ideas and Content (10 points)* \_\_\_\_\_

Clear and focused with anecdotes, citations from other authors, and details that support the main ideas.

### *Organization (5 points)* \_\_\_\_\_

Effectively organized and logically developed, moving the reader through the text to showcase and enhance the central ideas. There is an inviting introduction, thoughtful transitions, and the writing flows smoothly to a satisfying conclusion.

### *Voice (5 points)* \_\_\_\_\_

Compelling and engaging, appropriate for the purpose and audience, and both explanatory and persuasive. The reader is shown why the topic is important and is provoked to think about the issues and problems that are the theme of the paper.

### *Conventions (5 points)* \_\_\_\_\_

Correct and accurate with regard to spelling, punctuation, grammar, and other standard writing conventions to enhance readability.

### *Design (5 points)* \_\_\_\_\_

Provides explanations and rationales for author's choices in research design, including interest in topic, study sample, data collection methods, and data analysis.

### *Analysis (10 points)* \_\_\_\_\_

Presents compelling evidence for claims and analysis is thoughtful, insightful, and clear.

### *Findings/Implications (10 points)* \_\_\_\_\_

Includes central findings summarized in the conclusion and a discussion of the significance and implications of these findings for the researcher and for teaching in general.

### **Total** \_\_\_\_\_



*Final Grade for Part II*

<b>Assignment</b>	<b>Grades</b>
Research report	50 points
Literature review and reference list	40 points
Class presentation, participation and personal contributions	10 points
<b>Total</b>	

A+ = 98 – 100 points

A = 94 – 97

A- = 90 – 93

B+ = 87 – 89

B = 83 – 86

B- = 80 – 82

C+ = 77 – 79

C = 73 – 76

C- = 70 – 72

Unacceptable = below 70



