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“I’m not so sure...” : Teacher educator action research into uncertainty

Carrie Rogers - Western Carolina University

Abstract
Using a framework of uncertainty that is informed by Hannah Arendt’s philosophy this four-semester action research project describes the creation and analysis of an assignment that allows teacher candidates to explore their own uncertainties in regards to the teaching profession. This action research project examines the assignment and its development over time toward the goal of encouraging teacher candidates to have a disposition that frames uncertainty or doubt as an essential and necessary part of teaching. Findings were mixed. While this study reaffirms the theoretical perspective that action research, for me as a teacher educator, is about taking pedagogical risks to improve the quality of educational processes (Elliott, 1991) teacher candidates’ dispositions toward uncertainty remain a concern. While many, in this study, saw uncertainty as inherent to teaching many also felt that these uncertainties could be remedied with the right training or experience.

Introduction
From the very beginning of their careers there is a palpable pressure for new teachers to possess the knowledge of best practices and the ability to implement them effectively with diverse students. Many teacher education programs, through numerous methods courses and placements in schools, do give teacher candidates the skills to do such things. Yet, educational organizations, teacher educators and philosophers have agreed that knowledge and skills are not enough in the teaching profession. The development of the ability to discern when and how to put one’s knowledge and skills into action is essential. This ability is often described as a disposition. There are multiple dispositions required of the teaching profession: an openness towards diversity; the ability to engage in collegial relations; to think critically; to remain flexible, among others, are paramount to new teachers’ success in the classroom as well as help them to be more than “cogs” in a technical process” (Thorton, 2006, p. 53).
Developing a positive disposition towards uncertainty is important for it, uncertainty, is an enduring component of teaching. Uncertainty has been noted in early works on the profession of teaching by Jackson (1990), Lortie (2002) and Floden and Clark (1988). Uncertainty or unanticipated events or unknown outcomes, all form a part of teachers’ daily work in classrooms. Floden and Buchmann’s (1993) article on uncertainty took the stance that too much uncertainty potentially promotes anarchy, but too little uncertainty could promote dogmatism. According to Helsing (2007), the literature on reflective practice and inquiry, like the studies of Lampert (1985) and Romano (2006), find uncertainty as a positive stimulus for growth and change. Overall, the literature supports the idea that uncertainty is always going to part of teaching and those teachers that understand the dynamic and uncertain nature of teaching are able to act effectively when faced with uncertainty (Floden & Buchmann, 1993; Hatch, 1999; Labaree, 2000).

In an early work, Floden and Clark (1988) ask about the stance teacher education should take towards the idea of uncertainty and suggest some ways that teacher candidates can be helped to understand that “uncertainty in teaching can be reduced but not eliminated” (p. 516). Cultivating any disposition, particularly one towards uncertainty, does not lend itself to a technical approach. This kind of “soft skill” is not quantifiable or determinable by a test score or even portfolio evaluations with a rubric. If dispositions are habits of mind and ways of being it is imperative to help new teachers grow these habits through an intentional, developmental, process (Dottin, 2009; Osguthorpe, 2008). This action research study describes the iterative process I used to implement a writing project as a way to develop an optimistic disposition towards uncertainty among teacher candidates by exploring their uncertainties about their chosen profession and coming to acknowledge and accept uncertainty as an inherent but manageable condition of teaching.

**Methodological Framework**

Action research and uncertainty are inexorably connected. Early action-research proponent Stephen Corey (1953) wrote, “If the consequences could be guaranteed, no research [action] would be needed” (p. 39). As a former elementary teacher who engaged in action research in my classroom (Rogers, 2014) I have continued the inquiry stance into my teacher education classrooms. Guided by Hannah Arendt’s (1958) philosophy of action in which we start “new unprecedented processes whose outcomes remain uncertain and unpredictable” (p. 231) and John Elliott’s educational action research, I engage in a philosophically-driven action research methodology. John Elliott (1991) defined action research as a study of a situation that focuses on improving the quality of action within that situation. In a 2004 essay, Elliott draws upon Arendt’s theory of action to offer a place for the existence of the self in action and highlights that both theories focus on the process of action rather than just objective or outcomes of the research.

Action, for Arendt (1958), is “revelatory” (p. 180) in that the person engaging in action discloses their essential being to others. Two important ideas that are conditions of Arendtian action are natality and plurality. Levison (1997) introduced natality as “Arendt’s shorthand term for human initiative” and the basis of action (p. 439). Natality is the capacity that all humans have, whether they know it or not, to “begin anew” (Arendt, 1958, p. 9). This capacity of beginning is an essentially uncertain endeavor. Floden and Clark (1988) echo Arendt’s belief about humans and uncertainty and explicitly connect it to
teaching when they write “teaching involves human beings, who are ultimately unpredictably and unknowable” (p. 507).

Using Elliot’s cycle and focus on improving action, along with the Arendt’s idea that who one is is disclosed through action, this methodological process reveals my practices and my own thinking in the process as well. In this study I share the Not So Sure project, my goals for the project, and the results of the first semester. Then I share the subsequent changes over the following three semesters with data analysis focusing on the main question: Did the teacher candidates develop an optimistic disposition that acknowledges uncertainty as part of their profession and how did my changes to my practice influence this?

The Research Context

To acknowledge doubt as part of teaching and to encourage questioning and answer seeking I implement a project called “Not So Sure” in my seminar for an early field placement in the elementary education program at my university. Teacher candidates may be in a variety of methods courses during the second semester of their junior year but they are required to attend seminar that accompanies their extended field experience. This field experience requires a minimum of 60 hours (roughly one day a week for 10 weeks) in an elementary classroom. In this non-supervised field placement teacher candidates are required to complete three classroom observations, teach lessons and have cooperating teachers’ evaluate them. In the on campus component teacher candidates meet weekly to discuss issue of practice raised by their field experiences, engage in case discussions, and a complete a writing project on a teaching topic that they are uncertain about. It is this last classroom component that is the subject of this action research.

Findings

Not So Sure Project

In this first extended field placement these teacher candidates are becoming more aware of the myriad professional tasks and expectations of teaching. Questions and concerns are numerous. In an effort to help teacher candidates get answers to their questions and to begin to synthesize their preparation for uncertainty in teaching I created the Not So Sure (NSS) project. Structured writing assignments are a common way to access teacher candidate thinking (Arrastia, Rawls, Brinkerhoff & Roehrig, 2014). Yet, this project is different than typical reflective writing in teacher education. This project is done in three steps over the semester in a cyclical pattern focusing on one topic. The first part is naming a part of teaching that the teacher candidate is concerned or curious and exploring the reasons for that concern or curiosity, henceforth called the naming step. The second part is the researching step and the final part of the paper is the reflection step when we look back on the process of writing the paper and other experiences from that semester that are helping teacher candidates feel more confidence about their decision to become a teacher (Appendix A).

The first part, the naming step, is facilitated by a classroom activity in which issues that are uncertain for the teacher candidates are named and identified through small and large group work. The researching step is also facilitated by classroom discussion and peer-
work, and occurs after teacher candidates submit the first part of the paper for evaluation. For the researching step teacher candidates are grouped based on their topics and encouraged to think about sources for understanding the issue. For example in semester III of the project two teacher candidates identified a specific genetic disorder that they were interested in learning more about. These teacher candidates were paired to share their topic and look for resources. I encourage them to use are peer-review teaching journals accessed through our library databases or national organizations. I encourage the use of interviews with teachers, administrators and instructors as well as printed and internet resources. In researching step the teacher candidates gather info on their issue and create a plan or list of steps to help them with the issue. After the research is completed and that part of the paper turned in the teacher candidates the share the results of their projects informally with the rest of the members of seminar. In the final part, the reflecting step, teacher candidates review the process of naming and researching their uncertainty, their practicum placement and other coursework to synthesize what they have learned this semester and apply it to their future as beginning teachers. A main goal of the course is to help teacher candidates develop an optimistic disposition towards uncertainty. This disposition is that that doubt or uncertainty is common in teaching and finding ways to address it is useful to understanding yourself as teacher. I also want them to feel more confident about their chosen profession and understand themselves as agents in their own education.

The main research question is did this strategy achieve what I set out to do: did the teacher candidates develop a disposition that acknowledges uncertainty as part of being a teacher? There were also several sub questions as well: Was the NSS process looked upon as valuable? Were the teacher candidates more confident about entering their profession? As with most classroom practices this is an iterative process. In my first semester I was attempting to conceptualize my essential goal and translating that into activities and artifacts that may provide evidence in changes in student thinking about teaching and themselves as teachers. This paper addresses the procedures, teacher candidates’ responses and changes I made over the few semesters of implementing the NSS project and the way that project continues to evolve and impact my practice as teacher educator.

Semester I

During this semester in a qualitative content analysis (Schreier, 2012) of the NSS project, I focused on what the teacher candidates found uncertain, the types of resources used and the utility of the process to the teacher candidates. These categories paralleled the three sections in which the paper was completed and themes emerged naturally from the analysis of the first semester of papers described below. Data analysis began with the first part turned in early in the semester. A chart was created indicating the general topic of uncertainty. The second step of data analysis occurred when the final papers were collected. A colleague and I read all the essays of the first semester of the course and noted common themes and patterns. These themes were about sources of uncertainty, types of resources used, and indicators of perceived utility of the process for themselves as future teachers. We found that the sources of uncertainty either came from a personal experience or from a perceived lack of information in their teacher education experience. The types and qualities of resources used to become more sure about this topic varied. A majority of
teacher candidates used cooperating teachers or other human resources to interview. The use of peer-reviewed research was minimal.

**Subsequent Semesters’ Pedagogical Movements**

The findings in the first semester led to some slight but perhaps significant changes in the second semester. While the steps (naming, researching, and reflecting) stayed the same, the directions were refined particularly for the research and reflecting steps. In facilitating the research step I wanted the teacher candidates to be more thoughtful about their sources. I continued to encourage the interviews and conversations with more experienced teachers but I also modeled an ERIC search for one of the topics. Directions for reflecting step changed the most [see appendix A]. The direct prompt about the paper process remained but I also asked them to think broadly about their experiences across the semester and to identify experiences that will help them in their future.

Each semester a chart [Appendix B for example] was created for the essays identifying topic, sources used and value of process, using the categories generated in Semester I. Over the four semesters uncertainty about classroom management maintained dominance in the candidates’ papers while issues of knowing content, curriculum and instructional strategies also played a large role. Other topics included student rights, maintaining a work-life balance, mandatory reporting processes, and appropriate relationships with students. The sources for research stayed the same: cooperating teachers, former teachers, books, blogs and research articles easily obtained by candidates were used. Widening the parameters for the reflection section in Semester II saw an increase in the areas that teacher candidates drew upon for future guidance. Some candidates focused on a particular class session from their methods courses, or a particular interaction with a student or cooperating teacher, while others named many sources of direction that they could draw upon in the semesters ahead.

**Analyzing Data**

Since my goal for the essay was to help teacher candidates understand that having questions (doubt) is common in teaching and that, much like action research, finding answers to that doubt is iterative or cyclical in nature where the resolution of one issue most likely leads to other questions about practice I spent the bulk of analysis on the final part of the paper. To determine the value of this project and to answers my research questions I used three sources of data: the reflection step of the paper, standard course evaluation data as well as teacher-created evaluations.

In Semesters II and III the project was positively mentioned several times in the student evaluations at the end of the semester. In Semester II feedback was given on the value of the project and recommendations that more time be spent on the results and sharing in class. In Semester III it was mentioned several times as the best aspect of the course in the final evaluations.

**Data Analysis Process.**

After selecting direct quotes from the final part of the paper and placing them into the chart I started to identify categories that represented the level of understanding that the pre-service teachers had of the larger philosophical underpinnings of the assignment.
Beginning inductively on the assumption that all teacher candidates would indicate that they were more confident but with the key difference in how they viewed doubt or uncertainty two large categories were created: Confident-Doubt Free and Confident-Doubt Remaining. Confident-Doubt Free teacher candidates would be confident that they had “solved” their not so sure issue so would be “free” of doubt. They would have seen the process as a way to solve their problem and be unable to generalize [at least articulately in writing] that the NSS process has wider implications to their future profession. An excerpt of a Confident-Doubt Free essay below:

Though there will always be uncertainties for students with severe disabilities or abilities, I feel like I have a better base for how to approach these students. I am thankful for the experiences I have had this semester and I look forward to gaining more experience in the classroom so that differentiating can become more natural for me and my students.

This essay was coded into the Confident-Doubt Free category because of the writer’s exclusive attention to the issue of differentiation for students with disabilities. There was no mention of uncertainty in other realms of teaching nor how they could be addressed through the iterative process like the NSS project.

The Confident-Doubt Remaining [CDR] categories indicates those teacher candidates who feel more confident after the semester but explicitly indicated that the doubt and uncertainty will remain something to “deal with” in their profession and the NSS process is one way to address other uncertainties. An excerpt of an essay coded CDR from Semester I: “Going through this “not so sure” process of researching strategies to deal with angry parents has given me the skills to do this in the future with other issues that I’m not so sure about as a teacher.” Here the writer acknowledges the value of the NSS project to solving one uncertainty [dealing with angry parents] but then extends the idea that “in the future” there will be other not so sure issues.

Expanding Categories

The first semester of papers fit well into the broad categories of Confident-Doubt Free and Confident-Doubt Remaining but with subsequent semesters and increased amounts of data more nuanced categories emerged. In particular, two issues became evident with the expanded directions: 1) in some essays the paper process was not even mentioned and 2) the paper process was presented as a great step by step [technical] way to solve problems without the explicit acknowledgement that uncertainty is a condition of the profession. Categories were revised beginning with the idea of increased confidence, parsing out the sources of confidence, and the role the project played and then a detailed analysis of the responses in an attempt to determine if they acknowledged uncertainty as an inherent component of teaching. The chart below gives an illustration of the data analysis process and overall results for the four semesters (See Figure 1).
Conclusions

The main research question is: Did this strategy and my changes to my practice achieve what I set out to do? Did the teacher candidates develop a disposition that acknowledges uncertainty as part of being at teacher? Was the NSS process looked upon as valuable? Were the teacher candidates more confident about entering their profession? Was there any indication that they felt more agency?

Implications for the Teacher Candidates

Overall the teacher candidates did feel more confident about their chosen profession of teaching at the end of their semester and a majority indicated that the NSS project had a direct influence on this confidence in addition to their other experiences. Numerous teacher candidates across the semesters valued the process for the freedom it gave them to examine their own uncertainty and helped them get with a concrete example of how to engage in reflective action. One student wrote that the paper allowed her to “name those fears or unsure moments and turn them into learning opportunities.” Another wrote, “the process...gave me an idea what I could do to make sure that I am being a reflective teacher.” A majority of teacher candidates (57) demonstrated a developing a disposition towards uncertainty as being an ever present part of teaching. One teacher candidate wrote that “this paper has made me realize that there will always be things I run into as a teacher that I will not be sure about...” Many teacher candidates shared similar thoughts. Teacher candidates definitely felt more agency, or control, over future uncertainties. An unexpected outcome was the sense of “not being alone” in one’s uncertainty and many teacher candidates placed high value on the ability to share their
struggles with each other in the classroom. This result echoes Flodden and Clark’s (1988) suggestion that if teachers talk about the uncertainties in teaching it reduces a sense of individual inadequacy (p. 519).

**Implications for Teacher Educators**

While the teacher candidates overall seemed to benefit from this project, even if it was simply answering a question they had, I remain unsatisfied with the outcomes of the project at this time.

There was a very small number (32 out of 102) that could articulately indicate uncertainty as an essential condition of teaching and that having uncertainty was healthy and a way of being rather than a technical problem to be solved. As one student wrote:

I finally came to the realization about the reasoning behind this assignment. Was it merely an assignment about writing another essay with resources, but to make it relevant the topics were educational based? Or was there an underlying cause for this assignment, one that was supposed to be the epiphany for all of us students as we begin to embark on the next stage of our educational careers? For me, it was the epiphany of what a teacher does, is, acts, and responds. The point of this assignment was to teach us pre-service teachers that you never know what issues you may face during your teaching careers, but the most important thing to remember is: how you are going to respond to these issues?

This student communicated in his writing that the project was about how the whole being of teacher responds to uncertainty. Juxtaposed to the project being seen as a “step-by-step process” to implement when face with uncertainty. For me, this result is an example of a constant tension I feel as teacher educator who functions within an Arendtian philosophy of human action as being and becoming. I wish teacher candidates to have experiences that help move them to understand that teaching and experiences in a classroom are an extension of their being and a fluidity of responses are needed in that space. While process is something I highly value the students’ understanding of process as technical step by step tool to apply to an issue is contrary to my fundamental value of process as a way of becoming, which I found difficult to communicate through written directions for the project. In fact, changing the directions after Semester I may have contributed to this problem by moving from more-opened ended to more specific directions for reflection.

Another problematic outcome of this project was the teacher candidates valuing their cooperating teachers’ experience and the experience of teaching over the knowledge gained in their teacher education program or ideas from research. This was quite evident in Semester I when many teacher candidates only used their cooperating teacher as a resource to address their uncertainty. While in the subsequent semesters the modeling of research journal searches was implemented and the directions rewritten to include a non-human source the essays still continued, for the most part, to uncritically share their CT’s experiences as best practice. This was a conundrum for me as a teacher educator. I have always placed high value on the knowledge generated from teachers’ practice (Sato, Kern,
McDonald & Rogers, 2010) but as a teacher educator I also place high value on experience and knowledge gained from research.

Both of these implications for my practice reflect the constant tension between forcing parameters and letting things occur naturally. I do feel that facilitating this process through modeling, peer discussion and deep class discussion about the importance of realizing uncertainties and naming and identifying how you can become more confident is important for teacher candidates. Future cycles, however, will need to attend to the language of directions and the cultivation philosophical dispositions regarding uncertainty.

In 1953 Stephen Corey advocated for what he called action research, “research that is undertaken by educational practitioners because they believe that by doing so they can make better decisions and engage in better actions” (Corey, 1953, p viii). As a former classroom teacher Corey’s words were a hallmark of my practice and as current teacher educator I continue to examine the quality of my actions in a scholarly manner. While the long-term impact of a project like this is hard to quantify what can be known is that the process of the assignment improved each semester in practical and theoretical ways. Practically, listening to student feedback allowed for smooth implementation and a more student-centered project that was welcomed at this time in their teacher education program. Theoretically, teacher candidates began to draw connections among their courses and experiences and realize while “teachers’ work lives are mainly experienced in the ‘gray’ areas between ‘black and white’ alternatives” (Hatch, 1999, p. 237) that tackling ones’ uncertainty can be a positive, rather than paralyzing, experience. They are for the first time developing the skills to communicate effective with cooperating teachers, manage issues that arise in the classroom and beginning to self-evaluate their response to events in the classroom.

As would be expected as part of being compliant to an instructors’ power of grading many teacher candidates indicated that they found the assignment helpful in building their confidence. Some students, however, realized the more philosophical importance of the paper. After the first semester the directions in Part III of the paper asked them to directly reflect on the process but still only a few teacher candidates understood that this assignment was much more than simply solving a problem. Helping most teacher candidates develop ways of thinking about issues in teaching that reside in those gray areas (Hatch, 1999) takes more than a semester-long assignment. Teacher candidates’ are craving concrete tools and knowledge about how to teach and many teacher education programs are providing those technical skills. But we must also provide the critical thinking and human relations skills, the dispositions, which accompany pedagogical know-how.

Recent research into uncertainty and teacher education presents the idea that having some doubt and questioning one’s self-efficacy may be an essential disposition of teaching (Schuck & Buchanan, 2012; Settlage, Southerland, Smith & Ceglie, 2009). However uncertainty can be seen as an unprofessional term (Munthe, 2001) because it implies that one is not prepared for the professional responsibilities of teaching. Floden and Clark (1988) suggest that uncertainty has virtues that are obscured by the negative attributions to the word and suggest terms such as openness or awareness yet, they continue, teaching is truly uncertain at times (p.514). If we continue with the premise that teaching involves
working with humans and humans have the ability to act in unpredictable ways then there is no other word that sums up this essential component of the teaching profession. A dispositions towards uncertainty needs to be addressed within teacher education and to do this I created an assignment that is simultaneously practical and deeply rooted in theoretical and philosophical ideas. And because I wanted to become a better at my own actions I conducted action research on the process. The results were mixed and there are lingering dissatisfactions but new questions to pursue. Yet, along with my teacher candidates learned that to engage in a “new unprecedented processes whose outcomes remain uncertain and unpredictable” (Arendt, 1958, p. 231) is far more positive and satisfying then to continue to remain uncertain.

References


Appendix A: Assignment Directions for Semester I

Not So Sure Paper ASSIGNMENT OVERVIEW

Rationale: It is helpful to contemplate and then articulate what we are unsure of as we approach our future practice as elementary teachers and explore ways to deal with moments and events that lack certainty.

Purpose: This assignment is intended for you to reflect and write deeply about one of your concerns about teaching and learning.

Details: All three parts will be discussed and modeled in class. Each part should be 2-3 pages with the final paper not to exceed 10 pages. We will have two writing workshop days to help with your writing and to clarify ideas for the final two drafts. Type your paper (12 pt.; double spaced) and make sure, at the beginning, to include your full name, the date, the course name, and your instructor’s name. You will submit your paper to a drop box in the Blackboard system. If you need help with this process, please ask your instructor.

PART I:

Define/name something in teaching which you are not so sure about.

Assessment:

Clarity: Does the writer define the issue clearly? Is there an example that resonates with the reader?

Depth: Does the writer explore the possible reasons why this issue is a “not so sure” issue?

Technical: Your paper will be returned for revision if there are more than five errors, with at least 20% subtracted from the re-write.

PART II:

Explore ways you might become more sure about this issue.

Assessment: You need to adequately address each of the following:

1) First, you should be sure you have been very specific in identifying and defining your narrow ‘not so sure ‘issue. You need to be able to explain it clearly, both in writing and orally.

2) How (through what resources) is this issue researchable? Be specific. For example: Consult veteran teachers (there are at least six other possible resources).

3) Pursue at least two resources. What did you discover?
4) Now that you have this new information, what will be your action plan?

   Don’t just write *I'm going to communicate with parents*, but lay out how you are going to do that: the tools (email, handwritten notes, visits, invitations to your classroom, etc.) you will use, when you will do it, how you will be proactive, etc.

PART III:

Explore how you might be more sure about other issues after completing this

Reflect:
Reflect back on your original idea and your approach to addressing it: how does this process you went through help you think or address other issues you have been exposed to in class or in your practicum placement? Give concrete examples. (Reading and responding to the case about the teacher & principal has helped think about what I would do. I know it would be important to do x, y & z in order to stand up for my beliefs.)

Evaluate:
Has looking at different scenarios [that teachers may face] in class and exploring your own uncertainty through this paper been helpful to you as a beginning teacher? How so?

Assignment Directions for Semester II-VI

*Not So Sure* Paper ASSIGNMENT OVERVIEW

Rationale: It is helpful to contemplate and then articulate what we are unsure of as we approach our future practice as elementary teachers and explore ways to deal with moments and events that lack certainty.

Purpose: This assignment is intended for you to reflect and write deeply about one of your concerns about teaching and learning.

Details: All three parts will be discussed and modeled in class. Each part should be 2-3 pages with the final paper not to exceed 10 pages. We will have two writing workshop days to help with your writing and to clarify ideas for the final two drafts. Type your paper (12 pt.; double spaced) and make sure, at the beginning, to include your full name, the date, the course name, and your instructor’s name. You will submit your paper to a drop box in the Blackboard system. If you need help with this process, please ask your instructor.
PART I:
Define/name something in teaching which you are not so sure about.
Assessment:
Clarity: Does the writer define the issue clearly? Is there an example that resonates with the reader?
Depth: Does the writer explore the possible reasons why this issue is a “not so sure” issue?
Technical: Your paper will be returned for revision if there are more than five errors, with at least 20% subtracted from the re-write.

PART II:
Explore ways you might become more sure about this issue.
Assessment: You need to adequately address each of the following:
1) First, you should be sure you have been very specific in identifying and defining your narrow ‘not so sure’ issue. You need to be able to explain it clearly, both in writing and orally.
2) How (through what resources) is this issue researchable? Be specific. For example: Consult veteran teachers (there are at least six other possible resources).
3) Pursue at least three resources. What did you discover?
4) Now that you have this new information, what will be your action plan?

   Don’t just write I’m going to communicate with parents, but lay out how you are going to do that: the tools (email, handwritten notes, visits, invitations to your classroom, etc.) you will use, when you will do it, how you will be proactive, etc.

PART III:
Reflect & synthesize course experiences
In the final part of your NSS paper I would like you to reflect back on all your experiences this semester across all your courses and the Practicum/Block Experience. The purpose of this part is to synthesize your learning this semester and relate it to your future as an Intern and eventual classroom teacher. The prompts below give you starting points in writing this section. Give specific examples and scenarios.

   How do you see the process (naming, writing & researching) of the NSS paper as transferable to your future teaching career?
   Are you more confident as you prepare for Internship? What has helped you?
   What skills & knowledge have you acquired that will continue to help you throughout your internship and into your first years of teaching?
## Appendix B

<table>
<thead>
<tr>
<th>Topic</th>
<th>Sources</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>R1 Knowing content</td>
<td>Website/textbook</td>
<td></td>
</tr>
<tr>
<td>R2 Curriculum &amp; Standards</td>
<td>CT/ERIC [no proof]</td>
<td></td>
</tr>
<tr>
<td>R4 Autism</td>
<td>Family Ts</td>
<td></td>
</tr>
<tr>
<td>R5 First day/week of school</td>
<td>CT/prof books</td>
<td>Not alone, risk, process</td>
</tr>
<tr>
<td>R6 Bullying/discipline</td>
<td>Website/T</td>
<td>Ok to be unsure</td>
</tr>
<tr>
<td>R7 Special needs</td>
<td>T/CT</td>
<td>Practicum=value</td>
</tr>
<tr>
<td>R8 Bullying</td>
<td>CT/County info</td>
<td>Expect the unexpected, not alone</td>
</tr>
<tr>
<td>R9 Differentiation</td>
<td>T/website</td>
<td>Unexpected, weak analysis</td>
</tr>
<tr>
<td>R10 Responding/planning when things go badly?</td>
<td>CT/PD Opps</td>
<td>Not alone</td>
</tr>
<tr>
<td>R11 Lesson plans</td>
<td>CT/Intern</td>
<td>Growth</td>
</tr>
<tr>
<td>R12 Teaching Language Arts</td>
<td>T</td>
<td>Practicum=value</td>
</tr>
<tr>
<td>R13 Upper Elem Students</td>
<td>Two Ts</td>
<td>Challenge as opps for growth, time, cycle</td>
</tr>
<tr>
<td>R14 Covering the standards</td>
<td>CT/prof book</td>
<td>process</td>
</tr>
<tr>
<td>R15 Organization/PCK</td>
<td>CT/T</td>
<td>Agency, direct exp is best</td>
</tr>
<tr>
<td>R16 Discipline</td>
<td>3 Journal articles</td>
<td>Practicum=value</td>
</tr>
<tr>
<td>R18 Grading/curriculum/capable</td>
<td>CT/Article</td>
<td></td>
</tr>
<tr>
<td>R19 Discipline</td>
<td>CT/Article [no proof]</td>
<td>Process</td>
</tr>
<tr>
<td>R20 Differentiation</td>
<td>Two Ts</td>
<td>Narrow to topic, unable to gen.</td>
</tr>
<tr>
<td>R21 Standards/Curriculum</td>
<td>Two Ts</td>
<td></td>
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<tr>
<td>R22</td>
<td>Working with the standards/not being limited</td>
<td>Methods course experience</td>
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<td>-----</td>
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<td>---------------------------</td>
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<tr>
<td>R24</td>
<td>Discipline</td>
<td>CT/Principal</td>
</tr>
<tr>
<td>R17</td>
<td>Bullying, Discipline, Teaching, Planning</td>
<td>CT</td>
</tr>
<tr>
<td>R23</td>
<td>Discipline, (need to narrow(“slipping up”)</td>
<td>CT/website</td>
</tr>
</tbody>
</table>